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INDIA OFFICE

MILITARY REPORT
ON THE
PROVINCE OF YÜN-NAN.
GENERAL STAFF, INDIA.



1913.

Catalogue No. $\frac{C. 191}{Con.}$

SIMLA :
PRINTED AT THE GOVERNMENT MONOTYPE PRESS,
1913.

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MILITARY REPORT
ON THE
PROVINCE OF YÜN-NAN.
GENERAL STAFF, INDIA.



1913.

Catalogue No. $\frac{C. 101}{Con.}$

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FIRST EDITION

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.. 1902

NOTE.

This work (C-101/Con.) renders obsolete Part I of the publication Military Report on Yunnan, 1902 (C-61/Con.) *N. B. Part II (Gazetteer) of C-61/Con. Military Report on Yunnan, 1902, has been rendered obsolete by the issue of Gazetteer of Yunnan, 1913, (C-103/Con.) Part III (Routes) of Yunnan 1902, (C-61/Con.) will become obsolete on receipt of Routes in Yunnan, 1913 (C-102/Con.).* Obsolete editions should be destroyed and destruction certificate furnished.

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MILITARY REPORT

ON THE

PROVINCE OF YÜN-NAN.

CHAPTER I.

HISTORY.

Yün-nan lies in the south-west corner of the Chinese Empire adjoining the French province of Tong-king, and Burma. It has an area of about 150,000 square miles, and a breadth east and west, through the centre, of about 430 miles. In actual size it is the third largest province of China, though its population is only about 12,000,000. The capital is Yün-nan Fu.

The Chinese first entered Yün-nan about 200 B. C., and although the invaders themselves did not remain long they were soon followed by immigrants from the east. From that time onwards the Chinese have been gradually moving westwards, establishing themselves firmly in the fertile and healthy parts of the province, and conquering or absorbing the various indigenous tribes.

In 800 A. D. while the Shans and Tibetans were at war in North-West Yün-nan the Chinese appeared, first in the rôle of mediators, but eventually subjugated a large section of the former race. The next 900 years were spent in a series of small wars in which the Chinese were generally successful. Between 1278 and 1661 they invaded Burma several times from Yün-nan, and on three occasions besieged Mandalay.

In 1767 they made a determined effort to crush the Burmese. A force of 250,000 foot and 25,000 horse advanced, partly by the Ta-ping route on Bhamo and partly by the San-ta route against Mogaung. They were severely defeated on both lines and were forced to cede several Shan States to the King of Burma as a result of the campaign.

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In 1840-42 Yün-nan was somewhat disturbed by the "opium war", for the cultivation of the poppy had become one of the staple industries of the province.

The great T'ai-p'ing rebellion of 1851 had but little effect on the province; but in 1853 the Panthay Revolt broke out which was no less disastrous to the western provinces than was the T'ai-p'ing revolt to the eastern.

The origin of the Panthays or Chinese Muhammadans is somewhat obscure. It is said that the influence of Islam began to permeate the provinces of Yün-nan and Kuang-hsi about 630 A. D. The Panthays themselves claim an Arab descent; but the movement was probably more religious than ethnic. Many of the Panthays of to-day have, however, distinctly Semitic features.

Goaded by the exactions of the officials and encouraged by the disturbed state of the country due to the T'ai-p'ing revolt, the Panthays broke out into active rebellion in 1854, and up to 1868 fortune favoured them. Ta-li Fu and most of the western towns were occupied, and in 1863 an attempt was made to capture Yün-nan Fu. Owing to general mismanagement the operations failed and from this time on the rebellion waned.

The Chinese, recovering strength after crushing the T'ai-p'ing revolt, gradually assumed the offensive and laid siege to various towns held by the Muhammadans. In nearly every case these strongholds were induced to yield by promises of mercy, but a general massacre invariably followed.

In 1873 Ta-li Fu fell after a prolonged siege due to its great natural strength. The outer lines were captured through treachery, and lack of food caused the defenders to negotiate; mercy was promised, but 11 days after the siege, upwards of 30,000 men, women and children were butchered. After this the rebellion died away, but a hatred of the Chinese still remains in the hearts of the Panthays: a circumstance of which advantage might be taken by a hostile power.

It is noteworthy that in Yuan-shih-k'ai's proclamation of the Chinese Republic, religious tolerance for the Muhammadans was mentioned as part of the policy of the new government.

Notwithstanding this and many other smaller disturbances the Chinese have been moving westward, steadily, if slowly,

and the last 15 years have wrought a complete change in the situation on our frontier. Hitherto China has been accustomed to consider her frontier as inhabited by mere barbarians; but now, having absorbed these, she finds herself faced by a Great Power desirous of actually demarcating the line of separation. This is a new conception for the Chinese, but that they have appreciated it, may be gathered from their appointment of a frontier Deputy and their acquiescence in the establishment of periodical frontier meetings with officials from Burma, for the purpose of settling disputes between tribesmen living on or near the line.

The relations between Great Britain and China are governed by the Convention of 1894 as modified in 1897. Certain trade arrangements were agreed upon, and both sides undertook not to build any forts within 10 English miles of the frontier, except such as might be required for maintaining order amongst the frontier tribes. The general frontier line was agreed upon and it was decided to appoint a joint commission to delimit it.

In 1895 a Convention was concluded between France and China, determining the Tong-king-Yün-nan frontier. Ho-k'ou and Ssu-mao were also opened for trade more especially with France. The following year, in order to safeguard our interests, a Convention was arranged with France by which each Power agreed not to attempt to gain any exclusive privilege or monopoly in Yün-nan.

In 1899-1900 the Burma-China Boundary Commission delimited the frontier line with the exception of that to the north of Latitude $25^{\circ}33'$ and a short length in the Wá country.

The anti-foreign agitation which culminated in the Boxer rising of 1900 does not appear to have disturbed Yün-nan.

In 1902, T'êng-yüeh having been declared a treaty port, a branch of the Chinese Imperial Maritime Customs was opened in the town.

In this year China also gave assurances that Great Britain should have the same facilities for making railways in Yün-nan as had been accorded to France. In 1902 an insurrection of West River Pirates or "Black Flags" gave serious trouble to the Chinese in Eastern Yün-nan. They were joined by bad characters from Tong-king and some malcontent soldiers of Marshal Su's army. The Chinese troops sent to quell the disturbance

suffered several reverses before order was restored. In the same year some wild Lisus descended upon the territory of the Saw-bwa of Nan-tien and killed and looted some of the Shans. 600 Chinese soldiers were sent from T'êng-yüeh, and succeeded in punishing the tribesmen. In 1905 and 1906 the turbulent Lolos gave the Chinese a good deal of trouble in north-east Yün-nan, and some of the Tibetan tribes of the north-west overran part of the Mekong valley south of Ba-t'ang.

In 1908 revolutionary and anti-foreign feeling ran very high in Yün-nan owing partly to the British expedition to Lhasa and partly to the progress of the French railway from Tong-king towards the capital of the province.

In December 1909 the Teng-keng chief, with the tacit permission of the Chinese authorities, made a raid upon the village of Hpi-maw (P'ien-ma) and burnt part of it. His contention was that the villagers had not paid dues to him on account of a royalty on the coffin-wood trade. This violation of the frontier led to an expedition being sent from Myit-kyi-na in the following year to assert our rights to this territory which the Chinese Government now claimed. The expedition occupied the village without opposition, the Chinese having retired over the hills.

In March 1911 some 200 Chinese subjects, mostly Lisus of the Teng-keng district, again crossed the frontier, and penetrated into the Ngaw-chang and Nmai Hka valleys. The ostensible object was exploration. They were pursued by a party of Military Police and 3 of them were captured. The remainder split up and were reported to have suffered severely. Their ultimate fate is not known.

Anti-British feeling was fanned into a flame by the Hpi-maw incident and an idea was current that Great Britain and France were secretly plotting to "partition" the province.

In 1910 some Chinese troops mutinied but, coming in contact with some French troops near Lao-kai, were dispersed.

By November 1911 the whole of the province was in the hands of the supporters of the anti-dynastic revolution.

The provisional government first set up in Yün-nan was remarkable in that it included several Yün-nanese officials, this being contrary to the old established order. Yün-nan is now administered by a Military Governor styled *Tu-tu*.

In 1912 Anglo-Chinese relations were somewhat strained owing to the extremely offensive attitude of a Chinese official named Li Ken-yuan who appears to have gone out of his way to maltreat any one accused of friendship to Great Britain, more particularly certain contractors who supplied the Hpimaw expedition with mules. A protest from the Foreign Minister led to his transfer.

At the end of January 1913 Hpi-maw was reoccupied and a post with a garrison of Military Police established; a bridged mule road and telegraph line were constructed to connect the new post with Laukhaung.

On the outbreak of a rebellion of the Mantzu tribes in Eastern Tibet and Western Ssü-ch'uan in 1912, the Yün-nan Government despatched a contingent of some 3,000 men into the north-west corner of the province to co-operate in the subjugation of the tribesmen. Owing to the jealousy existing between Ssü-chü'an and Yün-nan, however, arising out of the action of Yün-nan troops in Ssü-ch'uan in the early stages of the revolution, the Ssü-ch'uan authorities would not allow the Yün-nan troops to cross the provincial frontier or to take part in the campaign. The latter therefore remained in the north-west corner of the province "watching the Burma frontier" and several parties were detached into our territory to exact tribute from the tribesmen, to make roads and to explore.

In 1912 it became evident that, in order to check the aggressive tendency of the Chinese frontier policy, we should be obliged to make effective our occupation and administration of the hitherto unadministered tracts of northern Burma right up to our declared frontier line (the Salween-Irrawaddy watershed). Expeditions were therefore sent up the N'mai hka valley and into Hkamti Long in October 1912 to bring these tracts under British administration and to explore and survey the country right up to the frontier line. Both expeditions joined hands in February 1913 at the mouth of the Akhyang valley. Here some parties of Chinese with military escorts which were also exploring, surveying and attempting to administer the country were encountered. As the result of three skirmishes which ensued, several Chinese were killed, a few prisoners and a number of arms, papers and maps were captured, while the remainder were driven into the snows and across the frontier.

1913.

Hpimaw was also permanently occupied in February 1913, and a Military Police post was at once built there. The occupation caused very little stir in Yün-nan.

In 1912-13 the Yün-nan Government undertook the subjugation of the Shapa Lisus dwelling in the Salween valley north of Lat. 26°.

CHAPTER II.

GEOGRAPHY.

Yün-nan is bounded on the north by the province of Ssü-ch'uan ; on the east by the provinces of Kuei-chou and Kuang-hsi ; on the south by Tong-king and on the west by Burma and the Shan States. The extreme north-west corner touches Tibet, but the limits in that direction are not clearly defined. Boundaries,

From about Latitude 29° N. Longitude $98^{\circ} 30'$ E. the provincial frontier line goes eastwards to the Yang-tze R. and follows the right bank of the river for about 60 miles. It then takes a south-easterly direction and meeting the river again about Longitude $101^{\circ} 30'$ follows the right bank to within 20 miles of the town of Sui-fu (Ssü-ch'uan). From this point turning southward it follows a very irregular line along no clearly defined natural feature until it meets the French frontier about Longitude 105° ; with this it marches westwards to about Longitude $101^{\circ} 10'$ Latitude $21^{\circ} 30'$, where it meets the Burmese frontier. From this point it takes a generally north-westerly direction and crosses the Salween river about Latitude 24° . Thence it strikes westwards for about 80 miles and then, turning northwards, takes in that part of the country west of the Salween river which is known as the "T'êng-yüeh Salient". The actual frontier line is demarcated as far north as a hill north-east of the Pang-seng chet pass, Latitude $25^{\circ} 33'$, Longitude $98^{\circ} 14'$. Frontier.

In 1906 Sir E. Satow, His Britannic Majesty's Ambassador at Peking, presented a memorial to the Chinese Government stating that the British Government considered that north of the point mentioned above, the boundary line follows a range of mountains, which forms the watershed between the Taping and Shweli river systems, and that of the Irrawaddy, to a peak (known as Chung-ho, 11,500') in the high range of mountains known generally as the Salween-Irrawaddy divide, and that it follows this latter range to about Latitude 28° .

A range of snow-covered hills, apparently the end of the Himalayas, which appeared to merge into the Salween-Irrawaddy watershed, at about Lat $28^{\circ} 10'$, was reported by Consul Litton in 1905.

From Latitude 26° to about Latitude $27^{\circ} 40'$ the Salween valley is inhabited by a wild, untamed tribe known as Lisaws (Lisus). The unhealthiness of the country, the poisoned arrows of the inhabitants and the precipitous barrier of mountains have combined to discourage any movement from east to west in this zone. North of this, Chinese activity has been very apparent in the last few years as a result of their endeavours to pacify and subdue the tribes between Ssü-ch'uan and Tibet and to open a road to Lhasa which shall avoid the inhospitable northern country.

It was reported in 1910 that a stone at Lham Dun, between Ba-tang and Ya-ka-lo (Yên-ching), was supposed to be the boundary of Yün-nan, Ssu-ch'uan and Tibet; this was, however, denied later. It was also reported that a Chinese official at Ya-ka-lo was collecting dues from the country around Men-kong for the benefit of the province of Ssü-ch'uan. It would seem, however, that boundary lines have not up to date been considered of vital importance in this part of the world.

The frontier between Yün-nan and Burma after leaving the Me-kong river passes through the Shan country as far as Na-lawt ferry. Thence nearly as far as the Nam Ting river it passes through the territory of the wild Was. This section was not demarcated by the Burma-Chinese Boundary Commission, principally because there was an aversion on both sides to stirring up the turbulent, head-hunting tribesmen. From the Nam Ting to the end of the demarcated line the border territory is inhabited by Shans, although the Kachins and other tribes live in the hills. Of late years the Chinese have been gradually establishing a more direct rule over the Shans, and have enlisted Kachins and Lisus for military and police work on the frontier.

So far the frontier tribes are inclined to favour British rule, but the situation is likely to become complicated when those on the Chinese side become organised and stand as it were in direct opposition to their kinsmen on our side of the frontier.

In 1905 boundary pillars were erected along the demarcated line and these for the most part remain, although in 1909 there were several instances of their being destroyed or defaced. In 1911 negotiations were opened with the Viceroy of Yün-nan for a frontier commission to re-establish the pillars, but the revolution caused the scheme to be postponed indefinitely.

Owing to the frontier line passing through the middle of tribal country it is inevitable that there should be many disputes over ownership of land, arrest of malefactors, etc. In order to settle these matters frontier meetings have been established, which have been held annually at Sima and Nam-hkam.

At these meetings, representatives of both Governments assemble and frontier cases are dealt with on the spot. At first the Chinese were inclined to be obstructive, owing chiefly to the anti-foreign feeling which existed at the time. Subsequent meetings have, however, been very successful.

In 1907 the Chinese carried out a reconnaissance of the frontier, and in 1910 seven forts were constructed along the Burma frontier, at Ta-ho, Hei-ni-tang, Chi-na-pa, Mōng-ka, Mong-tōng, Si-ma-pa and Ku-yung-kai. These are not formidable and are apparently only intended as bases from which troops or police may keep order on the frontier.

The whole province of Yün-nan is mountainous, the western portion being rather more so than the eastern.

Western Yün-nan is a country of lofty mountain ranges and deep river valleys whose general trend is from north to south. In the north the mountains break away from the great Tibetan plateau and attain an altitude of 20,000 feet in many places; they diminish in height, as they run southwards, but in the extreme south of the province there are peaks of 11,000 feet.

The main rivers, from west to east, are:—

1. The Taping and Shweli, tributaries of the Irrawaddy and which join it in British territory.

2. The Salween and Me-kong which rise in the unknown Tibetan plateau and, for the first 300 miles of their courses in the province, are separated by only about 30 miles. After this they trend apart; the intervening district being drained by the Nam Ting and other affluents of the Salween, and south of these by the Nam Hsung, Nam Lam and other tributaries of the Me-kong.

3. East of the Me-kong and flowing for a time within 50 miles of it is the Yang-tze Kiang. This river after making a series of great bends flows north-east and forms the frontier of the province.

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4. Near the centre of the province are the sources of the Black river and Red river which flow in a south-easterly direction into Tong-king.

West of the T'êng-yüeh salient the country is hilly and thickly-wooded, intersected by numerous small streams flowing in narrow though highly cultivated valleys dotted with Shan villages.

Eastwards towards the Salween, the country becomes more rugged and mountainous until it culminates in the great watershed which rises to a height of 10,000 to 12,000 feet.

The Salween flows through a narrow, precipitous gorge at an elevation 2,000 feet lower than either the Shwe-li or Me-kong. Another range of rugged, precipitous hills, rising to 10,000 feet, separates the Salween and Me-kong valleys. These ranges are generally bare on their eastern slopes, but well-wooded on the slopes to the west. There is little cultivation and villages are few and small.

South-western Yün-nan is a very broken country, though the hills are lower than in the north. The valleys are low-lying, and unhealthy, so that the Chinese are unable to live below an altitude of about 3,000 feet: the lower levels are given up to the Shans.

East of the Me-kong valley the country becomes less mountainous and plains and level stretches become more frequent. The district between Ta-li Fu and Yün-nan Fu is sometimes known as the central plateau. Around these two towns are many rich and fertile valleys and plains lying at elevations between 5,000 and 7,000 feet.

To the north the country breaks up into deep and precipitous gorges as it falls to the Yang-tze basin; in the north-east and east the land is bare and inhospitable; in the south it is rather more mountainous and broken; in the south-east are barren, undulating downs containing depressions from which there is no drainage outlet. Some of the larger of these depressions form valleys of several miles in length, are well cultivated, and inhabited by Chinese.

Mountain System.

The whole of Yün-nan is a mass of mountains; the only clearly defined ranges are those which separate the various river basins

Of these the most important are :—

- (a) The three ranges which separate the Irrawaddy, Salween, Me-kong, and Yang-tze-kiang valleys.
- (b) The ranges which separate the Me-kong, Black River and Red River valleys.

In the north-east and east there are many isolated hills.

Passes—

The passes from British territory into the “T'êng-yüeh salient” north of the Taping river are :—

	Height.
The San-sigorge.—On the route from Sadon to T'êng-yüeh	8,800 feet.
Kam-bai-ti.—on the route from Seniku ..	9,130 „
Pang-seng-chet.—from the Shingaw hka ..	8,820 „
Panwa.—from the Chipwi hka	7,663 „
Hpare.—	{ 9,900 „
Lagwi.—	
Fen-shui-ling.—from Hpimaw	8,800 „

North of the T'êng-yüeh salient the passes across the Salween-Irrawaddy watershed are :—

- (a) From the upper Ngawchang valley to the Salween valley,—

	Height.
Hpimaw (P'ien-ma)	11,000 feet.
Chi-mi-li	13,000 „

- (b) From the Mekh valley to the Salween valley—

	Height.
Sajyang Pass	12,800 feet.
Salapam „	12,500 „
Lakhu „	10,700 „
Mekhe „	13,400 „
Shape „	12,800 „

(c) From the Ahkyang valley to the Salween valley,—

				Height.
Kawchi Pass	..	..	..	12,800 feet.
Shiku	..	..	..	13,800 ..
Magur	..	..	..	..
Alang	..	..	..	..
Mewa	..	..	..	..
Isu Razi or Longram Pass	..	..	..	..

(d) From the Taron valley to the Salween valley,—

				Height.
Yuragan Pass (Sing-pé-l'ka)	..	..	..	11,030
Masal-l'ka	..	..	..	..
Shu-wang-l'ka	..	..	..	..
Sang-za-l'ka	..	..	..	..
Latser-l'ka	..	..	..	..
Tung-wang-l'ka	..	..	..	..
Lungnoi Razi Pass	..	..	..	..
No la	..	..	..	14,120
La Geu la	..	..	..	17,380

Detail of river crossings.

Nature of crossing.	Intermediate distance.	Description.
	<i>Taping River</i>	Fordable in dry season as far as junction of the Sin-na (or Chih-na-Ho,) Latitude 25°8'.
Ferries .. ..	..	In San-si valley—4 boat ferries; principal one at Kuan-shang on Myitkyina-T'êng-yüeh road.
" .. ..	..	In Möng-Na, San-ta plain; 16 ferries, principal one at Nawng Hsai, and 2 at Man-waing.
Bridge .. ..	..	Iron suspension bridge just below mile 31 on Bhamo, Kuli-kha road.

Nature of crossing.			Intermediate distance.	Description.
Bridge	..	..	..	Myothit, a temporary bridge always swept away in the rains.
Ferries	..	..	..	Below Myothit at all villages.
<i>Nam-ti River.</i>				Fordable in most places except in the gorges.
Bridge	..	..	..	T'êng-yüeh—2 stone bridges.
"	..	..	..	1 mile west of T'êng-yüeh, stone bridge on San-si road.
"	..	..	..	On Mien--chin road at Ho-shun-hsiang.
"	..	..	..	3 miles south of T'êng-yüeh.
"	..	..	..	4 miles south of T'êng-yüeh.
"	..	..	..	Ho-k'ou (or Hsin-chai) suspension bridge, 23 yards long, 40 feet above the water.
<i>Shweli River (Lung-Chiang or Nam Mow.)</i>				Fordable in many places north of Kai-t'ou.
Bridge	..	..	..	Kai-t'ou.
"	..	..	..	8 wooden mule bridges between Kai-t'ou and Ch'ü-chih.
"	..	..	..	On road to Yung-ch'ang Fu, iron suspension bridge, 50 yards long, Lung-an-ch'iao.
Bridge and Ferry	..	..	..	Man-lo
Ferries	..	..	Between Man-lo and Ti-Yang	3 small ferries.
"	..	..	30 miles below Man-lo.	Ti-yang—small dug-outs to take 12 men, said to be some fords in dry season.
Ferries	..	..	70 miles ..	8 Ferries between Ti-yang and Mông-Mao, 14 ferries where stream divides, 7 ferries below the junction.
<i>Nam Ting River.</i>				Fordable above Meng-Lai in places except in flood time—current is always strong.
Fords	..	..	..	4 fords between this and Meng-Chien.

Nature of crossing.			Intermediate distance.	Description.
Ford and Ferry	..	..	..	Meng-chien, small ferry, deep ford.
Ferry	..	..	..	3 ferries in Meng-ting plains.
"	..	..	..	Between this and Kun-long—2 ferries, river is 80 yards wide and has a strong current.
<i>Salween River (or Lu-chiang or Nam-hkong)</i> Unfordable anywhere in the province.				
Bridges	..	..	..	North of Lu-ku (Latitude 25°- 50'), rope bridges only.
Ferry	..	..	..	Lu-ku.
			1 mile ..	Pi-li raft ferry.
"	..	..	25 miles ..	Between this and Meng-ku 2 ferries,
"	..	..	..	Meng-ku.
"	..	..	47 " ..	Between Meng-ku and Lu-chiang bridge, 4 ferries.
Bridge	..	..	..	Lu-chiang bridge on main road.
Ferry	..	..	2½ " ..	A ferry used when bridge is damaged.
Bridge	..	..	25 " ..	La-měng bridge and ferry.
Ferry	..	..	9 " ..	Pai-ta.
"	..	..	20 " ..	Ta-hel.
"	..	..	..	Between this and frontier 4 ferries.
<i>Me-kong (or Lan-ts'ang) River.</i> Unfordable anywhere in the province.				
Ferries	..	..	..	North of Fei-lung. Latitude 25° 47'—small ferries and rope bridges.
Bridge	..	..	..	Fei-lung bridge on road to Yün-lung Chou.
Ferries	..	..	..	Between this and Lan-ts'ang bridge two or three ferries said to exist.
Bridge	..	..	..	Lan-ts'ang on the main road to Ta-li Fu.
Bridge	..	..	55	North of Shun-ning Fu.

DETAIL OF RIVER CROSSINGS.

Nature of crossing.			Intermediate distance.	Description.
Ferry	..	..	..	Shên-chou (north of Yün Chou).
"	..	..	..	Yang-kai (north-east of Yün Chou).
"	..	..	..	Hsi-chang (north-east of Yün Chou).
"	..	..	..	Wu-yin (east of Yün Chou).
"	..	..	..	Man-pieh (east-south-east of Yün Chou).
"	..	..	..	Ka-li-kai (south-south east of Yün-Chou).
"	..	..	..	Ma-tai east of Mien-ning-T'ing.
"	..	..	30 miles ..	Ta-pêng.
"	..	..	140 ;; ..	Between this and Keng-Hung 8 ferries.

Lakes.

The Êrh Hai, 30 miles long by 6 broad, has the town of Ta-li Fu on its western shore. The K'un-yang Hai, 25 miles long by 8 broad lies a few miles south of the capital of the province.

The Ch'êng-chiang Hai, south of the K'un-yang Hai, is one of a series of lakes which take the drainage of the plateau.

In the south-east of the province are a large number of smaller lakes caused by the lack of drainage outlets.

Political geography.

Except in the south-west of the province, where the low-lying malarious nature of the country prevents them, the Chinese inhabit the plains and valleys throughout the province. They are most numerous in the following districts:—

T'êng-yüeh T'ing (new name	Chao-t'ung Fu
T'êng-ch'ung Fu.)	Yün-nan Fu
Ta-li Fu.	Lin-an Fu.
Shun-ning Fu.	Mêng-tzu Hsien.
P'u-êrh Fu.	
Ch'u-hsiung Fu.	

The Shans are found in the west and south-west, and the Tibetan races predominate in the north-west.

On the Burmese frontier are Kachins, Lisus, Lahus, Palaungs, Las and Was ; and throughout the province Lo-los and Miaos are found in scattered communities, generally in the more mountainous districts. The Panthays are chiefly found in the western parts of the province between Ta-li Fu and Burma.

Climate.

The climate of Yün-nan is influenced by the south-west monsoon. The rainy season lasts from June to October.

In the north-west, in the region of Tzū-ku and A-tun-tzū there are two rainy seasons, one from July to September and the other in February. The valley of the Me-kong, however, from latitude. 25° to 27° gets very little rain. The valley of the Salween is damper, more thickly covered with vegetation and more unhealthy than that of the Me-kong.

There are perpetual snows on some of the crests of the ranges which divide the three great rivers. In winter it is practically impossible to cross from the Me-kong to the Salween further north than latitude $25^{\circ} 50'$, on account of the snow.

Western Yün-nan is somewhat unhealthy in the rains. During the rest of the year the temperature is never excessive, and from November to February Europeans can march all day without inconvenience.

In the south-west, as has already been stated, the valleys are low-lying and malarious. In winter snow falls on the chain of hills separating the Black and Red rivers, but it does not remain for more than a few days.

The climate of Eastern Yün-nan is similar to that of Ssū-ch'uan and Kuei-chou, both of which are noted for the mists which hang over the land for the greater part of the year. The season of mist and rain begins in March or even earlier and lasts until November. In winter the climate of the valley of the Red river is dry, up to a height of 3,000 feet, above which the hills are enveloped in mist and rain.

The central plateau has an agreeable climate. At Ta-li Fu a record kept for 14 months showed a maximum of 76° and a minimum of 36° . Yün-nan Fu has a somewhat similar

climate, but the winds off the lakes and marshes are said to cause headaches, fever and ophthalmia.

Diseases.

Bubonic plague broke out about 1890 in the valley of the Black river and depopulated that part of the country to a considerable extent. It spread westwards to Mêng-tzũ and thence to Hong-kong. It is still to be found throughout the province, but has decreased considerably of late years.

Goitre attacks people of all ages and is prevalent in all districts irrespective of their altitude.

Malaria is prevalent in the low-lying valleys; that of the Salween having a particularly bad reputation. The Chinese are greatly subject to this disease. Salween fever is known as *tsang-ch'i*; its symptoms are high fever, ague and bowel troubles and it often proves fatal within 10 to 12 days of the attack.

Small-pox.—In 1910 there were 4,000 deaths in Yün-nan Fu from this disease, but this was an unusually high rate of mortality. The disease is met with throughout the province, but vaccination has been introduced of late, especially by the French, and the people are said to be beginning to appreciate the value of it.

Eye diseases.—Ophthalmia and sore eyes are very prevalent, and travellers are constantly entreated to supply medicines to cure them.

Horse diseases.—Anthrax, surra and glanders are sometimes prevalent.

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CHAPTER III.

POPULATION.

In no other part of the world of equal area are so many languages and dialects spoken as in the country between Assam and the eastern border of Yün-nan, and in the Indo-Chinese countries to the south of this region.

The following table of the languages of Yün-nan and western Ssü-ch'uan will serve as a general outline of the various tribes and races which inhabit the province. It must be realized, however, that these tribes in most cases do not inhabit any particular tract of country, but are found scattered about the province in small communities.

It often happens that a valley is populated by Chinese or Shans and the tops of the hills which bound it by communities of one or more of these tribes:—

Family.			Group.			Tribe.
Chinese	..	..	Chinese	..	..	Chinese.
Shan	..	..	Shan	..	..	Shan.
Mon Khmer	..	{	Miao-Yao	..	..	{ Miao.
						{ Yao.
			Min-chia	..	..	{ Min-chia.
			Wa-Palaung	..	{	{ Wa.
						{ La.
{ P'u-man.						
			{ Palaung.			
Tibeto-Burman	..	{	Tibetan	..	..	{ Tibetans (proper).
						{ Hsi-fan.
						{ Ch'ü-tzu.
						{ Moso.
						{ Lutzu.

Family.	Group.			Tribe.
Tibeto-Burman	Lolo	..	..	Lolo
				Lisu. (Liso).
				La-hu.
				Woni.
	Burmese	..	..	Achang.
				Maru.
				Lashi.
				Asi.
	Kachin	..	..	Kachin.

Chinese.—It is sufficient to say of the Chinese that they form the largest and naturally the most influential part of the population of the province. Out of the total population it is estimated that one-third is pure Chinese, though a still greater proportion is entirely under Chinese influence and is adopting Chinese manners and customs. The Chinese who inhabit Yün-nan are descendants of immigrants from other provinces, chiefly those north of the Yang-tze. Generally speaking, they prefer not to be called Yün-nanese and will refer to themselves as natives of the province from which they originated. Though most are from the north, there are many Cantonese in Yün-nan.

Panthays.—The origin of the Panthays or Chinese Muhammadans, as has already been said, is obscure, and though they claim Arab descent they are not always distinguishable from the Chinese.

They are of the Sunni sect, but are not bigoted or fanatical.

They preserve an intense hatred for the Chinese as a result of the barbarities following the Panthay rebellion. They are still oppressed by the Chinese officials, are treated with contempt, and generally made to consider that they are only allowed to exist on sufferance. They are to be found all over the province but chiefly to the west and south-west of Ta-li Fu. Their usual vocation is the carrying trade and mule-breeding;

in consequence they have an intimate knowledge of all the routes both in the province and in the neighbouring countries. Physically they are a fine and hardy race and are not addicted to the use of opium, or liquor. In 1906 it was estimated that there were 30,000 families in the province. Major Davies estimated their number at 3 per cent. of the total population, or, say, 360,000.

Shans.—The Shans mostly inhabit the western and south western part of the province, although they are found in other parts as well. They are the descendants or rather the relics of the old Kingdom of Nan-chao which flourished for 500 years, but fell before the Chinese in the 13th century in the time of Kublai Khan. The Shans are also to be found in the Hkamti Valley, Assam, Northern Burma (Shan States) and Siam, and from the Red River to Kuang-hsi.

In the province of Yün-nan they are grouped in two portions:—

(a) Those in the T'êng-yüeh and Lung-ling districts which comprise 10 semi-independent States governed through their own Sawbwas.

(b) Those in the P'u-êrh Fu district and in the district known as the Sip-Song Panna.

As a race they are peaceable, cleanly and orderly. They are excellent agriculturists, but have no military instincts. They have been driven out of all those districts in which the Chinese are able to live.

(a) The States in the T'êng-yüeh district are as follows:—

Chan-ta or San-ta.—The most northerly. It has suffered much from Chinese exactions and internal unrest as well as from the depredations of the Kachins.

Kan-ai.—The largest and richest of the Shan States. It lies along the Bhamo-T'êng-yüeh road. In 1909 the Sawbwa suffered financially at the hands of some Japanese adventurers, and lost favour with the Chinese authorities. The State might be taken under the immediate administration of the Chinese at any time.

Nan-tien.—Has been governed by an able and careful Sawbwa and has flourished accordingly. For some reason it also has lost favour with the Tao-t'ai of T'êng-yüeh.

La-hsa and Ho-hsa.—Though administered in the same way as the other Shan States they are peopled by Achangs, a race of skilled workmen, famous on the frontier as makers of the *dahs* with which every frontiersman is armed.

Möng-mao-Lung-chuan.—The people of these States have been the victims of the turbulent hill tribes. Much of the country-side is in consequence lying idle, the inhabitants having emigrated over the border. The Chinese Assistant Frontier Deputy was ordered to reside in the district, and as he is in command of the frontier levy an improvement may be looked for.

Chê-fang.—A poor State thinly populated and covered with many miles of swamp. The Sawbwa has of late been augmenting his revenue by smuggling contraband salt over the border. It is uncertain whether this is condoned by the salt authorities or not.

Mang-shih.—A rich flourishing State which does a profitable trade in rice, fruit and tobacco with the town of Lung ling-Ting.

(b) As regards the Shans of the southern district there is an evident intention on the part of the Chinese to establish a more direct rule. In 1910 a Chinese force was sent to quell a disturbance and stayed there in spite of the ravages of malaria. The country owes allegiance to a sort of Prince of Keng Hung, and it is possible that the Chinese may prefer to administer the country through him. The word 'Shan' is Burmese, the people call themselves Tai. and the Chinese call them Pai Yi (Pai-i).

Miao.—The Miao are found principally in the mountains of Eastern Yün-nan. They are believed to have originally inhabited the plains, but were driven into the mountains by the Chinese. They hold aloof from the Chinese and build their villages on high peaks, surrounding them with palisades or walls of sun-dried bricks.

Yao.—The Yo or Yo-jên, live in the mountains bordering the Me-kong valley in the south of the province, and also near P'u-êrh Fu. Their principal habitat is Kuang-hsi. They resemble the Chinese and copy them in most things.

Min-chia.—The name is derived from Chinese *Min*, natives, and *Chia*, family. They are found in considerable numbers

round Ta-li Fu, where they devote themselves to agriculture and cattle-rearing. Another branch of the same race is called I-Chia (*I*, meaning savage) but there is virtually no difference between them. They make good coolies.

Wa.—The Was inhabit the territory on the frontiers of Yün-nan, and the British Shan States between the Kun-Long Ferry and Keng-hung. Nominally they are British subjects, for the greater part of the country which they inhabit, fell to us as a result of the Burma-China boundary delimitation of 1897-1900. The actual border line has not been demarcated owing to the hostility of the tribe.

They are turbulent savages addicted to spirit worship and head-hunting. This latter propensity is a religious custom, their general prosperity and welfare depending upon the possession of skulls. The head-hunting season is in March and April. It is apparently immaterial to what race the owner of the head happens to belong.

Their villages are built in almost inaccessible places and would be difficult to take by storm. Round each village is an earthen rampart 6 to 8 feet high and of the same thickness, overgrown with cactus and other thorny bushes. The only approaches are by long and winding tunnels.

They are very diligent cultivators and are brave, independent and energetic. Their arms are *dahs*, and cross-bows with which they shoot poisoned arrows. They have many firearms, mainly muzzle loaders, but are said to possess some "Winchesters" bought from China.

La.—The Las inhabit the country to the north of the Was. They are apparently of the same family, but are more peaceably inclined.

P'u-man.—An unimportant tribe found only in the south and south-eastern parts of Yün-nan.

Palaung.—The Palaungs are also of the same family, but are a mild race. They inhabit the hills to the north of the Nam-ting river and the western end of the Shwe-li valley, but scattered communities are found all along the frontier. They are a peaceable people and have adopted Buddhism. They claim to be aboriginal.

Tibetans.—A full description of the Tibetans is to be found in the military report on Tibet. The Tibetans who are found in Yün-nan belong to the tribes which inhabit the country between Tibet proper and Ssü-ch'uan. They are sometimes called Man-Tzū, a name applied to all barbarians, sometimes Hsi-Fan which means 'western barbarians,' and sometimes Chiarung. or Ku-tsung. Their country is described as a political patch-work; some of the tribes being independent, some owing allegiance to Lhasa and some to China. The progress of China westward, and the administration of the late "Warden of the Marches", Chao Erh Fêng, has, however, brought them rather more under Chinese control. The province of Kham is inhabited by a famous fighting race known as the Ku-Tsung. These, at one time a turbulent race of nomads, are said to be settling down to a peaceful, pastoral and agricultural life. They are still great traders, and their caravans are met all over Yün-nan. particularly in the south, where they go to get tea. The disturbances of the summer of 1912 again excited these people, and a large number joined with the Tibetans in their efforts to crush the Chinese.

Moso.—The Mosos or Muh-sos are also of Tibetan origin. They are to be found principally in northern Yün-nan along the river Yang-tze.

Lu-tzu.—The Lu-tzu are a people living to the north of the Lisaws in the Salween valley and neighbourhood. They are allied to the Ch'ü-tzūs of the Taron valley. They are not a very formidable race.

Lolos.—The Lolos are the most numerous and important of all the aboriginal tribes of Yün-nan. They are a tall handsome race with well-marked noses and prominent chins. Altogether they are of a higher type than their neighbours. Their women are considered very attractive by the Chinese, and are much sought after. They own a written language and some religious literature. They are still a thorn in the side of the Chinese, and have steadily resisted administration and absorption. Besides the small communities scattered all over the province there is a large tract north of the Yang-tze which they occupy and which is surrounded by a cordon of Chinese garrisons. Into this stronghold the Chinese dare not penetrate, and it is from here that raiding parties periodically break out in search of prisoners and plunder.

Lahu.—The Lahus are also of this stock. They are not found in any great numbers and are said to be a degenerate tribe.

Woni.—The Wonis are an impoverished people found chiefly in southern Yün-nan. The name is applied by the Chinese to a number of clans of inferior Lo-lo stock.

Lisu.—The Lisus are a wild and very independent race who inhabit the valley of the Salween from Latitude 26° to $27^{\circ}30'$. They have spread westward to the Irrawaddy and eastward to the Yang-Tze. They are a turbulent race and are always fighting with each other. They are of interest to us, as they hold undisputed sway along part of our frontier, denying to the Chinese any access to that part of the frontier. They are greatly feared by the Chinese on account of their poisoned arrows and general fighting powers and are left entirely alone. Even they cannot live in the valley of the Salween, for although they cultivate the open stretches near the river, their villages are built 3,000 feet up the hill sides. Their daily climb makes them a tough and hardy race, and those who care for the work make good porters.

The Teng-keng Chief is believed to have at his call a force which could be raised from among the Lisu cross-bowmen of the Upper Salween. He was able to collect 500 men for his recent raid on Hpi-maw, and he might be able to raise a similar force, if ordered to do so by the Chinese Government. They would be armed with cross-bows and poisoned arrows, dahs and spears, and also with a few old guns if powder were forthcoming from the Chinese.

The Lisus are sometimes called Lisos, Lisaws, Yawyins, Lishaws and Khye-Nong. Some writers have considered these to be separate tribes. Differences in dialect no doubt are found, but the latest reports go to show that their manners, customs, religious rites, etc., are similar.

Achang or Maing-Tha.—The Achangs live principally in the Ta-ping valley between Bhamo and T'êng-yüeh and form the greater part of the population of the Shan States of La-Hsa and Ho-Hsa. They are good workers and make good coolies, and are employed largely in Burma in mining and road-making. They are excellent agriculturists and very good blacksmiths. They may be found in all our frontier villages in the cold and

hot weather doing blacksmith's work required by the Kachins, etc. They are a quiet, peaceable people.

Maru.—The Marus are found in small numbers in north-west Yün-nan. There are many more, however, in British territory. They are a tractable race and inclined to be industrious. They make good road-coolies and porters; some have been enlisted into our police battalions and have done very well. There is a tribe of probably the same stock known as Naing-vaw who live in the N'mai hka valley north of the Marus and who have enjoyed an evil reputation for some time, but they are apparently more harmless than was at first supposed.

Lashi.—The Lashis are found in much the same districts as the Marus; as fighters, they are not up to the standard of the Kachins.

Kachin.—The Kachins are the most important tribe on the frontier of Yün-nan and Burma. They are by nature a wild and warlike race who live in the mountains and are the cause of great anxiety to the Chinese and peaceful Shans who inhabit the valleys. They are still treacherous and vindictive in their natural state, being often engaged in blood feuds. Although dirty and unintelligent to look at, they seem to lend themselves readily to improvement. Those on our side of the frontier who have been enlisted into civil and military police, show into what a Kachin may develop.

The frontier meetings mentioned in another chapter, are chiefly taken up with settling feuds and difficulties between Kachins living on either side of the border.

RELIGION.

Religious sentiment in China finds its expression in the four allied cults of Taoism, Confucianism, Buddhism, and Lamaism, and in the separate religion of Muhammadanism.

The first two are developments of the doctrines preached by the two great philosophers Lao-tzū and K'ung-fu-tzū (Confucius) about 500 years B. C. Both these men aimed at inducing the Chinese to return to a more rational religion, but their principles were diametrically opposed to one another.

The original doctrines of Lao-tzū were so vague as to be incomprehensible to the great majority, who preferred the code of

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Confucius. In order to attract a following his disciples reverted to some of the earlier forms of spirit worship.

Buddhism was introduced from India into China about the beginning of the Christian era and though strenuously opposed by the Confucians it laid hold of the imagination of the people. Becoming contaminated by Taoism a schism occurred, one school of thought, which professed the purer form, found its home in Burma and Siam; while the other, which still adhered to some forms of spirit worship, pervaded China proper.

About 620 A.D. Buddhism was forced upon the Tibetans, who, being absolute barbarians, were unable to understand its philosophy; hence a priestly caste arose who ingeniously grafted the old animism or spirit worship on to Buddhism and so kept a hold on the people. These priests, or Lamas, eventually became so powerful that they assumed temporal as well as spiritual powers, supreme authority being vested in the Dalai Lama and the Tashi Lama.

All these four cults are permeated to a greater or less extent by the practice of ancestor worship. This is with the Chinese a real "religion" which has been handed down from time immemorial. Though, strictly speaking, it has nothing to do with any of the other religions, it is recognised by all as having enormous moral value.

Confucianism.—Stated briefly this is practised by the educated classes and is much more a code of manners and conduct than a religion. There are no priests or monasteries. Intercession with heaven may only be carried out by the Emperor in the metropolis, though parallel ceremonies are performed by officials in the provinces. Temples merely contain tablets glorifying the Emperor and Confucius. There are no shrines or holy places except the tomb of Confucius.

Buddhism is the religion of the masses; it is to some extent despised by the 'literati'. The main principle of the faith is that a man by leading a life of temperance, chastity and brotherly love, may attain a future state of complete peace and rest, and migrate from a state of existence to one of non-existence.

Buddhism in its higher form forbids the taking of life of any kind; but the observance of this is not strictly adhered to. There are shrines, temples and monasteries. The priests are

recognisable by their shaven heads. In the temples Buddha is worshipped concurrently with gods of war, fire, harvest, etc., etc.

Taoism.—Is practised alongside Buddhism and has borrowed many of its ceremonies; but in addition the priests indulge in alchemy and some of the older forms of nature worship. There are shrines, temples and monasteries. The priests wear their hair in a knot on the top of the head.

Taoism is a parallel form of the Shintoism of Japan.

Lamaism is a corrupt form of Buddhism. Its devotees are divided into three sects, yellow, red and black. The yellow sect is the ruling sect. Its head is the Dalai Lama and his followers profess belief in his perpetual reincarnation. The red sect professes the older form of Buddhism, but accepts the Dalai Lama. The black sect includes most of the tribes of the border land, which are found in Yün-nan. These acknowledge the spiritual, but not necessarily the temporal, authority of the Dalai Lama. Their religion retains many of the older, and to our minds offensive, practices of nature worship.

It may safely be stated that in none of these religions, except perhaps in Lamaism, is there any purely religious prejudice which a foreigner with a little discretion is likely to offend. Europeans, however, frequently attribute the purely political or social prejudices of the Chinese to some sort of religious sentiment.

The destruction of, or damage to, temples, shrines or monasteries should naturally be avoided, and cattle should not be slaughtered in their *immediate* vicinity. There is no religious objection to troops camping in temple courtyards, which are often commodious and convenient.

In deference to the veneration in which ancestors are held, graves should be respected. The trees which are often planted round the graves, such as cypress or the sophora or locust tree, should not be touched.

Mention has already been made of Muhammadanism. Partly, no doubt, on account of their Chinese connection, the Panthays are not given to great religious fervour. Their religious knowledge is, moreover, somewhat backward owing to their being cut off from other centres of Muhammadanism.

The Shans and some of the tribes are Buddhists and make pilgrimages to the Burmese centres of Buddhism. The wilder

tribes, such as the Lisaws and Was indulge in a primeval form of nature worship.

A word must be said here about the Christian Missions in Yün-nan and Ssü-Ch'uan.

The principal ones are the Chinese Inland Mission (Protestant) and the French Roman Catholic Missions. The missionaries, whether American, French or English, devote themselves to religious, social, moral and medical work among the Chinese and tribesmen. They are not interfered with much by the Chinese authorities. The missionaries may always be reckoned on to have an intimate knowledge of the local dialects.

The principal mission stations are marked on the map.

LANGUAGE.

The Chinese themselves have up to date considered it derogatory to learn a barbarian tongue, and in consequence they will not recognize any language but their own. Their inability to speak Shan or Kachin has been remarked upon by our officials at the frontier meetings.

The Shan language, though subject to minor local variations, is generally spoken by all the Shan tribes from Assam to Siam.

The languages of the tribes vary very greatly even though the distance which separates them may be small. An outline of the languages is given in Major Davies' book* on Yün-nan.

* See Appendix C.

CHAPTER IV.

RESOURCES.

General Outline.

The province of Yün-nan is one of the poorest in China. Its poverty and general backwardness are due partly to its remoteness from centres of industrial activity and from the sea, but largely owing to the dearth of good communications both in the province and with the outer world. A large part of the country being mountainous is naturally unproductive, but a large part, which is capable of development, is lying fallow for want of an agricultural population to work it. It is said that the country has never properly recovered from the ravages of the Panthay revolt of 1854—1873.

Up to 1907 Yün-nan depended largely on its poppy crop. Opium, owing to its small bulk in proportion to its value, afforded a convenient medium of exchange. The campaign against the drug has had a very unfortunate and far-reaching economic result, for the people having been deprived of this medium have nothing to exchange for commodities which they themselves cannot produce. In consequence there has been much distress throughout the province. It is true that since the destruction of the opium trade* there has been an increased production of cereals, etc., but since there is no possibility of exporting these crops owing to the difficulty of transport, little more than is required for home consumption is grown.

No great stores of grain are to be found in the province, and except immediately after the harvest, the country districts only contain enough to support the actual rural population until the next crop is ripe.

The province has great, though as yet undeveloped, mineral wealth. As soon as this is tapped and money flows into the country, no doubt its communications and general economic condition will improve.

*NOTE.—It is reported (May 1912) that owing to the chaotic condition of the civil administration, opium production is on the increase.

Supplies.

Rice.—Rice is the principal crop in the province, and is grown in all places where there is a natural or artificial water supply. In the west there are generally two crops a year, the harvest time being from September to November. The straw is kept for fodder and litter. The export of rice is prohibited. In the hills another form of rice (Hung-mi) is grown which does not require so much water: it is sometimes called dry rice, and is preferred by the muleteers and coolies who say it is more sustaining than ordinary rice.

Cereals.—Maize, millet, beans and peas are grown throughout the province, and their cultivation is on the increase: they are grown in the old poppy fields. A coarse kind of bean is dried and given to mules and ponies. From beans vegetable oil is also obtained.

Wheat is grown in all parts of the province. It is more common in the Tibetan country, but is being introduced into Yün-nan, and may serve as a substitute for the poppy. Flour is obtainable in any town and in many villages.

Barley is the principal food of the Tibetans.

Oats also are to be found in Ssü-ch'uan, and may also be introduced into Yün-nan.

Tea.—Tea is grown in the south and south-west. It is generally made into discs, in which form it is more easily carried. Much of it finds its way into Tibet. The export from the Shan States has been estimated at 900 tons annually. The crop is gathered in March and April. The flavour is not that to which Europeans are accustomed.

Sugar.—Enough sugar for home consumption is grown, chiefly in the Shun-ning Fu, Yün-chou and Pin-ch'uan districts, where the altitude is not great and the soil is rich.

Vegetables.—The Chinese are expert market gardeners and, generally speaking, a plentiful supply of various kinds of vegetables is always available where they reside.

Meat.—In the Muhammadan districts as well as in the Kachin and Shan countries a fair quantity of cattle is generally obtainable. Pigs are found in large quantities all over the province—sheep and goats are found in the Ta-ping valley and in the north-west of the province. Chickens are plentiful in every village.

Western Yün-nan contains a greater supply of cattle, sheep, etc., than Eastern Yün-nan. A cattle market is held annually about September at Sung-kuei (40 miles north of Ta-li Fu), 700 to 800 cattle are brought in from Li-chiang Fu, Chung-tien and the surrounding districts.

Native rations.—Gur, ginger, and chillis are to be obtained in the province. The possibility of obtaining *ghi* is very doubtful.

Ata.—As eaten by Indians is not obtainable. Very little *dal* is to be found.

Forage, etc.—Paddy is grown everywhere and the straw stacked. In some places grass also is cut and stacked for consumption in the dry season when grazing is very scarce everywhere.

Grazing is fairly plentiful in the north and west, principally in the higher altitudes. In some of the valleys inhabited by Shans there is abundant grass nearly all the year round.

Fuel.—Wood is the staple fuel of the inhabitants. The immediate vicinity of the towns has been denuded of trees. Towns of the size of T'êng-yüeh have few trees within a radius of 3 miles or so. Wood is brought in by the villagers. In the west, south and north-west there is more forest land than in the centre and east. It is often necessary to go some little way from the main trade routes to get wood.

Transport.

Owing to the absence of cart roads, except in the actual towns and in some of the more populous valleys, wheeled transport is practically unobtainable. Such carts as are found are used only for farm work or for going from village to village.

The carrying trade of the country is done by pack animals or coolies.

Mules.—Mules are found all over the country, but chiefly in the west and north-west. They are bred to the north of Ta-li Fu, in Li-chiang Fu. and the neighbourhood. The Panthays are great mule-drovers, and large numbers of mules are to be found in their country, i.e., between Ta-li Fu and Burma. The mules are generally rather small: about 12 hands being the usual height. They are not as a rule well fed by the natives, but nevertheless they are very hardy, strong and active.

The Ssü-ch'uan and Tibetan mules, of which a good number come to the Ta-li fair, are larger and would be more suitable as gun mules.

The loads are tied to a wooden frame which is very easily removed from the saddle. The whole is kept in position by balance; girths are seldom used. The usual load in the hills is 120 lbs. It is estimated that 10,000 mules might be found between Ta-li Fu and Bhamo—price varies from Rs. 60 to Rs. 150.

Ponies:—Ponies are used in the east for transport purposes. These too are small (13 hands), but are hardy and surefooted.

Bullocks.—The Shans use bullocks for transport purposes. The load is 120 lbs. The breed of bullock is small, 2 miles an hour is said to be their extreme pace, and 12 miles is a long march for them. 1,000 to 1,500 might be collected in such places as Nam Hkam, Mong-wan and Mong-mao. 500 might be collected in some of the lesser valleys in the west and south-west of the province.

In Yün-nan and some parts of the northern Shan States loads are tied in the same way as on mules. In other parts in strong bamboo baskets. The loads are maintained by balance, no girth being used; British or Indian troops find great difficulty in adjusting them.

Coolies.

A great deal of the carrying trade of the province is done by coolies. In most of the towns there are contractors through whom coolies are obtained. Tribesmen, Chinese and many Ssü-ch'uanese engage in this business.

The average load is 60 lbs. A Lisu coolie is said to carry 70 lbs. in the hills. An average daily ration for a coolie is 2 lbs. of rice or $1\frac{1}{2}$ lbs. Indian corn or millet. In addition, they require a small quantity of oil and vegetables, such as turnip or cabbage, of which there are considerable quantities to be found round the villages.

Other resources, manufactures, etc.

Other commodities produced in Yün-nan are hides, drugs, horns, and iron cooking pots. Country blankets, made of hemp and wool, can be obtained in any town.

Mineral Resources.

The mineral wealth is considerable, but its development has been greatly retarded by the exactions and "squeezes" of the Chinese officials.

Copper mines are widely distributed all over the province and their output at one time furnished a very large part of the metal used in coining "cash", throughout the Empire.

Tin is worked extensively in the Ko-chiu mines in the south near Mêng-tzŭ Hsien.

Coal and Iron in close proximity are found in many places, notably at Yün-nan Hsien, Ma-chang, in the Yang-tze valley, Chiu-ya-p'ing-Hsien and at Tien-tang kuan, about 30 miles north of T'êng-yüeh near the Ma-li-pa road. Iron ores are melted at Ta-chien-pa in Yüing-ch'ang Fu, Hsi-o Hsien in Lin-an Fu, and Mêng hua in Ta-li Fu.

Lead, zinc and silver are found in many places, but more especially in the north and north-east. At Yün Chou there is a large lead mine. *Gold, antimony, arsenic, mercury and marble* are also found.

Salt.—Salt is an important article of trade and revenue. Salt fields exist at Yun-lüing Chou, Ting-yuan Hsien, Chên-yuan, Mo-hei and Wei-yüan T'ing. It is said that the supply of salt cannot always be depended on, and that enough to satisfy the wants of a large number of Indian troops might not be forthcoming. Much of the salt is of inferior quality and bitter; foreign salt is everywhere preferred.

Mining classes.—Miners are drawn from Chinese, Panthays, Lolos and Maing-thas. Shans and the other aboriginal tribes seldom take up this work.

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CHAPTER V.

MILITARY.

Note.—Much of the matter in this chapter applies to the Army in Yün-nan as it existed before the revolution; many details of nomenclature, distribution, etc., are therefore necessarily incorrect at the time of writing (June 1913) but are included in the absence of definite information of present conditions.

The Chinese forces in Yün-nan consist of two principal organizations, the Lu Chün and the Kuo Min Chün.

1. *The Lu Chün* (Regular land forces) popularly known as the Hsin Chün (Modern Army) are stationed as follows:—

Yün-nan Fu	..	.. 3 Infantry Regiments and Divisional troops.
Lin-an Fu	..	.. 1 Infantry Regiment (temporarily detached to Kuei-chou).
Ta-li Fu	..	.. Head Quarters and 2 Battalions.
Yung-ch'ang Fu	..	.. 1 Battalion.

The primary rôle of the Lu Chün is to repel foreign aggression, and to this end, it is kept concentrated as far as possible in Divisions and Brigades for more efficient administration and training.

2. *The Kuo Min Chün or Hsün Fang Tui* (Provincial Troops). These are the old Lien Chün (sometimes known as the Hsu-Pei-Chün). Since the revolution their name has been altered to Kuo Min Chün. They guard the Burma frontier, and garrison the towns immediately east of it; they also act as police throughout the province. They are primarily intended for the maintenance of internal order, and the suppression of brigandage, and consist of infantry only.

During the last two or three years efforts have been made to make the Hsün Fang Tui an efficient force, and as it is at present

constituted, equipped, and drilled, it has a very decided military value, and must be considered under the heading of Regulars. The unit of organization is the Ying.

The organizations of the Lu Chün and the Hsün Fang Tui are entirely separate, and neither men nor officers can exchange or transfer from one to the other, but very probably some of the Hsün Fang Tui may be embodied in the Lu Chün, when the latter come to T'êng-yueh, as, it is said, they shortly will do.

In addition to the above there are the following auxiliary forces :—

(a) Pao Wei Tui (Frontier Protection Troops), 150 men stationed at Lung Chuan, near Man waing on the Bhamo-T'êng-yueh road. Uniform and equipment practically the same as those of the Hsün Fang Tui.

(b) Salt Gabelle Levy. A Preventive force of 150 men.

(c) The armed followers of the Shan Sawbwas.

(d) The Tu-li-ta-tui— an independent organization constituting the garrison of T'êng-yüeh ; the officers are drawn from the Lu-chün.

Of the above (b) and (c) are of very little military value.

Former organizations, such as the T'uan Lien (Militia), the Lu Yung and Piao Ying employed on escort duties, and the old 'Green Standard' troops, have almost disappeared, having been either entirely abolished, or absorbed into the re-organized Hsün Fang Tui.

LU CHÜN.

Under the re-organization scheme the Lu Chün of Yün-nan was, by October 1912, to consist of 1 Army Corps of 2 Divisions. At the present time, owing to a lack of funds, the organization of one Division only, the 1st, is fairly complete ; the 2nd division is considerably below strength. There are only 6 instead of the 8 Regiments required for the Army Corps.

In February 1913 it was decided to fix the strength of the Yün-nan Army at 2 Divisions and one Independent Brigade. In war these 2 Divisions are to be expanded into 2 Army Corps.

The headquarters of the 1st Division are at Yün-nan Fu and those of the 2nd Division at Mêng-tzŭ.

The normal strength of units is as follows :—

- 1 Army Corps (Chün) = 2 Divisions.
- 1 Division (Shih T'uan) = 2 Brigades.
 - 1 Regiment Cavalry.
 - 1 Regiment Artillery.
 - 1 Maxim Gun detachment.
 - 1 Battalion Engineers.
 - 1 Transport Battalion.
 - Divisional Band.
- 1 Inf. Brigade (Lü) = 2 Regiments.

Infantry.

- 1 Regiment (T'uan.) = 3 Battalions.
- 1 Battalion (Ying) = 4 Companies (front, right, left, and rear).
- 1 Company (Lien) = 3 Sections.
- 1 Section (P'ai) = 3 Sub-sections.
- 1 Sub-section (P'êng) = 14 Non-Commissioned Officers and men.

Establishment of Regiment :—107 officers (of whom 69 are combatant) and 1897 Non-Commissioned Officers and men, etc. (of whom 1,691 are combatant).

Regimental Staff = 11 officers (of whom 3 are combatant) and 16 other ranks.

Cavalry.

- 1 Regiment (Piao) = 3 Squadrons.
- 1 Squadron (Ying) = 4 Troops (front, left, right, and rear).
- 1 Troop (Tui) = 2 Sections.
- 1 Section (P'ai) = 2 Sub-sections.
- 1 Sub-section (P'êng) = 14 Non-Commissioned Officers and men.

Establishment of Regiment :—90 Officers (48 combatants), 1,027 Non-Commissioned Officers and men (773 combatants).

Artillery.

1 Regiment (Piao)	=	3 Battalions.
1 Battalion (Ying)	=	3 Batteries of six guns each.
1 Battery (Tui)	=	3 Sections.
1 Section (P'ai)	=	3 Sub-sections.
1 Sub-section (P'êng)	=	14 Non-Commissioned Officers and men.

When, as in Yün-nan, all 3 battalions are Mountain Artillery, the establishment is :—

102 Officers (54 combatant).

1700 Non-Commissioned Officers and men (1,286 combatants).

Engineers and Transport.

1 Battalion (Ying)	=	4 Companies.
1 Company (Tui)	=	3 Sections.
1 Section (P'ai)	=	3 Sub-sections.
1 Sub-section (P'eng)	=	14 Non-Commissioned Officers and men.

The establishment of a battalion of Engineers is :—

32 Officers (22 combatant).

635 Non-Commissioned Officers and men (559 combatant).

The establishment of a Transport battalion is :—

36 Officers (22 combatant).

716 Non-Commissioned Officers and men (559 combatant).

For detail of establishments, see Appendix I to this Chapter.

The normal strength of a Division is 12,741, including 2,015 non-combatants.

Reports as to the strength of the forces in Yün-nan at the end of 1912 vary greatly, and the following estimate is only approximate :—

Lu Chün	10,000 to 12,000
Kuo Min Chün	7,000 to 8,000
Police	1,200
Bodyguard of Military Governor	500
Other escorts and frontier guard	300
	<hr/>
	19,000 to 22,000

There is reason to suppose that these numbers are being increased.

On December 31st, 1912, the garrison at Yün-nan Fu was stated to be :—

At the Northern camp, 2 Regiments of	
Infantry ..	3,000
At the Southern camp, 1 Regiment of	
Infantry ..	1,500
1 Regiment of	
Artillery ..	1,500
At the Kan-hai-tzü, .. 1 Regiment of	
(8 m. S.E. of the City) Cavalry ..	500
1 Battalion of	
Engineers ..	500
Governor's Bodyguard	500
	<hr/>
	7,500

The supreme command is vested in the Military Governor, who has a staff for military affairs. (See chapter VI.)

Characteristics
of officers and
men.

60 per cent. of the officers come from the eastern provinces, 30 per cent. from Yün-nan, and 10 per cent. from Ssü-ch'uan. Most of them have been trained in Peking and Japan, but there are said to be no Japanese among them. They live in messes and are in their social customs similar to the Japanese.

80 per cent. of the men are Yün-nanese; the remainder come from Ssü-ch'uan, Kuei-chou, Hu-pei, and Hu-nan.

The only tribesmen enlisted in the Lu Chün are the Minchia. Muhammadans are enlisted, but the proportion of them is



Types of Yün-nan Officers.

uncertain. Most of the men are illiterate, except in the Ta-li Fu Regiment, of which 50 per cent can read and write. All men are of good class, and are mainly of the farmer class and townsmen.

The Lu Chün is not popular with the civilian population, as the men indulge in bullying.

Nominally enlistment is for three years, after which men are liable to be called up for a further period of three years. Service may be continued up to the age of 45. Age for enlistment 18 to 24. Terms of enlistment and service.

A mild form of conscription exists, each village may be called upon to supply a contingent, but, as a matter of fact, no compulsion is used, nor is it necessary.

Men are enlisted and paid in full from the date on which they present themselves. The medical examination is somewhat lax, owing to a desire to recruit up to strength. Bad characters are rejected.

The cavalry cannot at present turn out more than 200 men fully equipped. The horses do not exceed that number. The arm is seldom exercised off the parade ground, and never moves at a faster rate than an amble. Drill is of an elementary description, and the rôle of the cavalry at present does not go beyond that of mounted orderlies. Their appearance and turn-out is smart. Cavalry.

Drill is smart, and the men seem to understand their weapon and their work. The practice was good on the single occasion on which it is known to have been carried out. Lack of practice is due to scarcity of ammunition, and the efficiency is further discounted by an almost entire absence of mules. Artillery.

Drill is good, and both officers and men can handle the gun. A section consists of 15 men, and serves and transports one gun, which is carried either on the back of a single man, or slung on two stout poles between two men. Maxim gun detachment.

The Engineer Battalion does no technical work, but is trained as infantry, though only about 100 were armed in 1910. Some of the officers are said to be trained engineers. Engineers.

There are no mules, and the men are being trained as infantry. For service, transport and drivers would probably be improvised from local resources, which are abundant. Transport.

Drill and training.

Barrack square drill on Japanese lines, physical drill, and the handling of arms are smartly carried out, and performed with a will. Extended order drill is practised and manœuvre and entrenching once a week.

At Ta-li Fu musketry is said to be carried out daily (each man firing six rounds once a week), and at other headquarters during six months of the year. Ranges 100 to 800 yards. 250 rounds ball and 150 rounds blank per rifle are allowed, but apparently much less than this is actually used. The greater part of the ammunition available goes to the Ta-li Fu garrison.

The day's work is in accordance with a fixed routine, and the men are kept fully occupied from Reveille (5-30 A.M.) to Lights-out (9-0 P.M.).

The singing of marching and patriotic songs forms a prominent part of the instruction.

The men attend school for 1½ hours a day.

Armament.

Infantry are supposed to be all armed with a 6.8 m.m. Mauser magazine (5 rounds) rifle. A small porportion of the men have rifles of other descriptions, but all have a serviceable magazine rifle of sorts, and the arms are all well kept.

Cavalry have a sword and a Mauser magazine (5 rounds) carbine.

Artillery personnel carry the same rifle as the infantry. The guns are 75 m.m. Krupp Mountain, carried on four mules as follows:—

No. 1 Mule.—Gun on top of saddle.

No. 2 Mule.—Breech on one side, portion of the trail on the other, and one piece of the mechanism on the top of the saddle.

No. 3 Mule.—Wheels and bars.

No. 4 Mule.—Heavy portion of trail on top of saddle.

The new condition of the guns indicates that they have practically not been used.

Maxim guns.—8 m.m. German made, 1908. Sighted to 2,000 metres. In good condition. Each gun has three small boxes containing dummy cartridge belts for drill purposes.



Type of Yün-nan Cavalry.



Type of Yün-nan Artillery.

Clothing.—The officers wear khaki. Those of the Ta-li Fu Uniform Regiment have dark cloth gaiters.

For badges of rank, etc., see Appendix III to this chapter.

In Yün-nan Fu the men of all arms wear khaki coats and trousers with white laced gaiter spats reaching to the knee. In Ta-li Fu (and presumably throughout the former 38th Brigade) the infantry wear coats and trousers of stout whitish native cloth, and white putties. The number of the regiment is embroidered in white on red shoulder straps.

Engineers wear dark blue, and Transport, brick-red shoulder straps, and the Maxim gun detachment have red stripes on the sleeves of their coats.

The free issue of clothing is :—

3 Coats and trousers annually.

3 Shirts annually.

1 Pair boots annually.

2 Pairs shoes annually.

1 Mackintosh annually.

1 Greatcoat triennially.

Infantry :—

Head-dress.

In Yün-nan Fu—khaki caps ;

In Ta-li Fu—black kepis with white tops.

Engineers—khaki caps with dark blue stripe.

Transport—white caps.

Maxim gun detachment—white cap with green stripes.

In Yün-nan Fu ammunition boots, unpolished, and in the Footgear case of the infantry at Ta-li Fu, dark blue cloth shoes.

Waist belts, rifle slings, and two small ammunition pouches, Equipment. are of black leather. The material and make-up is indifferent.

There is a considerable shortage in mess tins and waterbottles, and knapsacks are almost altogether deficient.

The artillery mule harness and gear is of excellent quality, but the loads are badly balanced and the gear badly fitted.

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Medical.

The Medical Department is not organized for service but there is in Yün-nan Fu a Military Hospital under a Staff Surgeon who is on the staff of the General. There are also 6 Assistant Staff Surgeons, one to each Piao (Regiment), and two Surgeons to each Ying (battalion).

In Ta-li Fu there are two Chinese doctors, each of whom receives 40 taels a month, and practises privately as well as doing military work. They wear uniform. Their knowledge is elementary, and their appointments are sinecures.

Headquarters.

The General's Yamen constitutes Headquarters, and in it reside—

All Advisers.

Supply Officers.

Accountant.

Judge.

Staff Surgeon.

2 A. D. Cs.

1 Veterinary Surgeon.

1st and 4th class Secretaries.

Animals.

The Cavalry use stallions of a good stamp, about 12-1. The 200 at present available are all black. One groom is employed for 8 horses.

There are hardly any mules for the artillery, and such as there are, are untrained, but they are first class animals, standing about 13 hands.

Barracks.

Barrack compounds are in all cases enclosed in a brick or stone wall, 9' to 10' high, but usually the stone work stops at 5' from the ground, and is capped by burnt brick.

At Pei-chiao-ch'ang there are three compounds, each for one Ying, containing 36 barracks in all, each about 60 yards long. The barracks and outhouses are rather crowded in their respective compounds, but the men are not cramped for barrack space.

At Wu-chia-pa, one compound, divided into two portions by a wall, contains both the infantry and artillery barracks. It is rectangular, the longer face 800 yards long, and outside is a dry ditch 8' deep. The infantry barracks number 36, besides officers'



Yün-nan Machine Gun Section.



Yün-nan Machine Gun.

quarters, etc., all in telephonic communication with the Colonel's house. There are 27 artillery barracks, each to contain 42 men (3 p'êng). Buildings to accommodate the guns are under construction.

At Ta-li Fu, there are two compounds, (a) the barracks, and (b) the hospital. The barrack compound measures 340 by 120 yards, and encloses 12 two-storied barracks to accommodate 150 men each, besides officers' quarters, recreation rooms, cook-houses, and tailor's shop. There are 2 or 3 small wells in the compound. The hospital is 35 yards long, with 14 small wards.

At Kan-hai-tzū the cavalry compound contains 20 barracks for 28 men (2 p'eng) each.

All barracks are very clean, well ventilated, and roomy, and kits and cots are kept neatly. Good brick latrines exist.

The Arsenal at Yün-nan Fu employs about 150 men. The buildings have been recently enlarged, but there is no trace of new machinery having been received. The old machinery has fallen into disrepair. There is no steam hammer. Rifles, small arm ammunition, and swords are manufactured, the ammunition being for the Hsun Fang Tui; that for the Lu Chün comes from Ssü-ch'uan. Arsenal and
Magazines.

The powder factory is just inside the north gate, and the gun and rifle ammunition is kept in the armoury, near the same gate.

In Ta-li Fu there are said to be 200 mule loads of ammunition kept in a building which does duty as a magazine, to the west of the parade ground, near the General's Yamen. It is in charge of 40 men of the 1st Ying of the Hsun Fang Tui.

Discipline is strictly enforced. The ordinary punishment for desertion is death on active service, and from six months to six years' imprisonment in peace, but recently a man was beheaded in Ta-li Fu for the offence, since when desertion is said to have practically ceased at this place, but it amounts to 1 per cent. per mensem in the rest of the province. Discipline.

Opium is strictly prohibited. The ordinary punishment for indulgence in it is one to three years' imprisonment. There have been about 30 convictions since the new army was formed.

The officers appear to give practically any form of punishment they may choose. Bambooing, though contrary to the Code of Military Law, is inflicted in a severe form.

Except on Sunday, which is observed as a holiday, the men are not allowed to leave barracks even between working hours. They are never out after 7 P.M.

The *morale* is probably good, as the men are well fed, well housed, and well paid. The only cause for discontent is the custom, which obtains, of remitting a large portion of the men's pay direct to their families, in order to make the service popular in the districts from which the men are drawn.

Rations.

A deduction of 1 tael and 2 or 3 mace a month is made for rations, which consist of rice and vegetables daily, and meat once in five days.

Education.

The following schools were in Yün-nan Fu in 1910:—

1. *Chiang Wu T'ang*, or officers' school.

Director, K'ao, 32 years old, educated in Japan.

Commandant, Lieutenant-Colonel Li., Assistant Commandant Major Chang.

Instructors, 30 (exclusive of drill instructors). 20 had graduated in Japan. There were no foreign instructors.

The school had been open only about 7 months. Number of students about 600, divided as follows:—

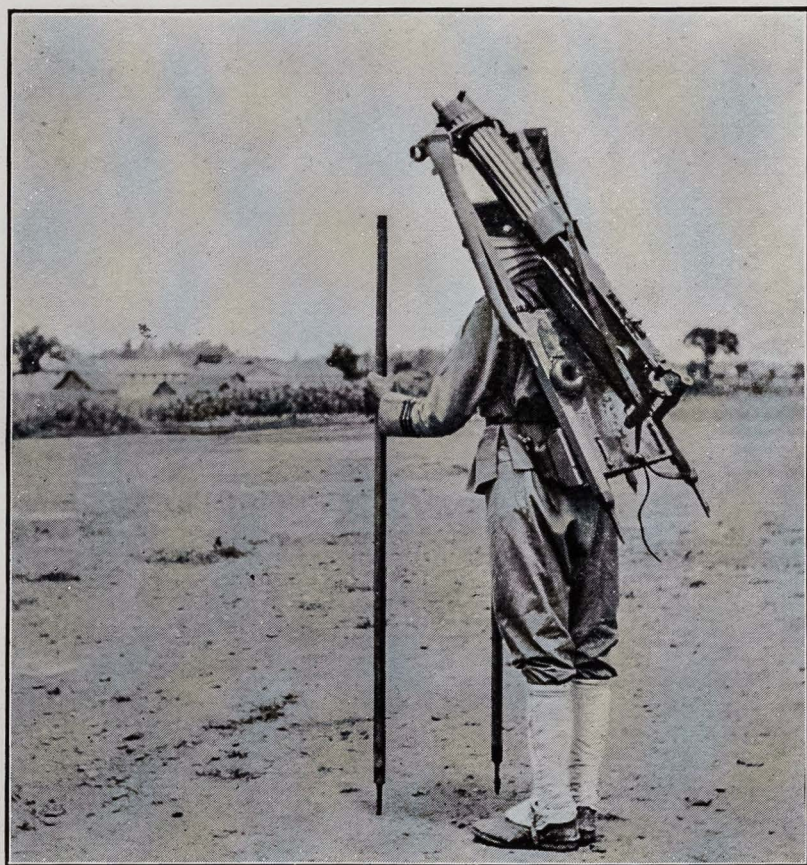
1st class.—Lü Chun, Captains and Lieutenants, more than 100. Duration of course one year.

2nd class.—Hsun Fang Tui, Captains and Lieutenants, more than 80. Duration of course one year.

3rd class.—Students taken from civil schools in Yün-nan, about 400. Duration of course $3\frac{1}{4}$ years.

Age of cadets 18 to 24 years. Their expenses are paid by Government. After the 1st year separate classes are formed for infantry, cavalry, artillery and engineers.

All students are armed and equipped as infantry (except for entrenching tool); clothing practically similar to regular army. There were also 4 new 75 m. m. Krupp Q. F. mountain guns with pack saddles, and 20 to 25 riding ponies.



Mode of carrying Machine Gun.

The school buildings are old barracks converted, but are clean and well arranged.

2. *Lu Chün*.—Primary school—started in 1906. 280 pupils, practically all from Yun-nan. Director Colonel Hu, Head of the "Staff Department" of the Local War Board. 20 Instructors.

The first and second classes are equipped as infantry but armed with very old pattern rifles. The 3rd class only performs marching and setting up exercises.

The instruction is carried out in accordance with the Lu Chün Pu regulations. French and Japanese are taught, the latter so as to give students access to military literature.

Graduates from this school are sent to the Wu Ch'ang Middle school; about 70 went in 1909.

The Director is reported to have said that the Yunnanese were rather slow at learning.

The buildings, though poor, are clean and well kept.

3. *Chün I Hsüeh T'ang* (*Army Medical School*).—Opened in 1909, 60 students, chiefly Yunnanese. Director, Wang—a Cantonese, with no foreign education.

Instructors.—7 Chinese, and 1 Italian doctor who is probably the only one who knows anything about medical work. He is also medical adviser to the War Board.

Duration of course 4 years—all instruction is given in Chinese. Graduates go to the army as surgeons.

The buildings are the newest and best in Yün-nan Fu but are not as clean and tidy as the others. Sleeping accommodation crowded and lacking ventilation. The impression of the officer who visited this school was that it was poorly equipped and was doing poor work.

4. There is also a survey school in Yün-nan Fu.

The supply of graduated students from the military school is increasing out of all proportion to the formation of Divisions and Brigades wherein to find places for them, and discontent is thereby being caused.

Reserve.

For war, the addition, to each Regular Division, of a Reserve Division and a Reserve Brigade is contemplated, but the Reserve Regulations are generally neglected. Numbers of men are kept on after 3 years, while others are discharged without further liability. Many men on leaving the colours, join the Provincial troops, or the Police, and though theoretically available on mobilization, actually they would not be so. There are no reservists available in Yün-nan.

Finance.

China has no War Budget, and military expenditure is met haphazard, partly by grants to the War Office from the Finance Board, as occasion demands, and partly by provincial treasuries. In principle the provinces pay for their own troops. The Metropolitan Finance Board, however, assists in the matter of purchases of armament, and munitions of war, and in the case of poor provinces, such as Yün-nan, contributions from other provinces are allotted.

The War Office has laid down the annual cost of a Division as £187,500 (exclusive of the cost of arms and ammunition), and this sum may not be exceeded without reference to Peking.

There is probably now no "squeeze" in the administration of the Lu Chün, either on the pay of the men, or in the maintenance of "paper" troops. The pay of the officers, especially of the juniors, though it has recently been reduced by 20 per cent. by order of the present Viceroy, is more than they know how to spend. Commanding Officers of cavalry and artillery units may perhaps make a little on the gun and horse allowances.

For details of pay and allowances, see Appendix III to this Chapter.

An accountant prepares the monthly pay abstract under the supervision of a Kuan Tai, who then submits it to the Viceroy, who, in turn, sends a delegate to pay the men on the 1st of the month.

Administration.

In matters concerning administration the military commanders work through the Fu Kuan, a Deputy Commissioner for administration on the staff of the Viceroy, or through the local T'ao T'ai or Fu Kuan at places other than the capital.

HSUN FANG TUI OR KUO MIN CHUN.**Numbers in
Yun-nan.**

The Hsun Fang Tui in Yun-nan number about 8,000, and pending the formation of an adequate Regular Reserve, they

would be available as a reserve to the Lu Chün. They are divided into Commands throughout the province. These again are classified in districts (Lu) as 'Left,' 'Right,' and 'Centre', according to their location.

The "Ying" is the unit for organization. There are altogether 43 Yings in the province, stationed as follows:—

In the T'êng-yüeh Command	13 Yings.
In the south	12 „
In the east	4 „
In the P'u-êrh Fu district	3 „

Along the Yün-nan portion of the Tong.

king-Yün-nan railway	11 „
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The whole are under the direction of the Commander-in-Chief, who resides in Ta-li Fu.

The Ying is commanded by a Lieutenant-Colonel, or Major. The Ying. Its nominal war strength is 301 officers and men, including cooks; and pay for that number is drawn by the Kuan Tai (Commandant). The outlying Yings are frequently not more than 200 strong; those in the cities average 240.

The establishment of a Hsün Fang Tui Infantry Ying according to the Hsün Fang Tui Regulations is:—

- 1 Kuan-tai-kuan (Commandant).
- 3 Shao-Kuan (Company Commanders).
- 3 Shao-chang (Assistant Commanders).
- 24 Shih-chang (Squad Commanders).
- 1 Secretary.
- 5 Writers.
- 1 Sergeant-Drummer or Bugler.
- 6 Drummers or Buglers.
- 16 Orderlies.
- 216 Privates.
- 24 Cooks.

Total 301 (271 combatants).

Since, however, the actual strength of a Ying varies, the above figures should be taken as only approximate. A Ying composed of 240 men would be considered as normal and up to strength.

The Commandants of the various Yings vary in training, age, and efficiency, and the state of the their Yings varies accordingly. The officers have no military training to speak of, but are making an advance towards efficiency.

Characteristics
of the officers
and men.

The men are drawn from the semi-tribal districts round Ta-li-Fu and Li-chiang. The Min-chia, who are probably the original inhabitants of Yun-nan, form about one-half of the 4th Ying.

An experiment has recently been made in the enlistment of tribesmen in the 4th, 5th and 11th Yings. These tribesmen are generally either Lisu (Yaw Yin), or Chu Shans (probably of Maru stock mixed with the Lepai Kachins), and their intelligence and discipline are well reported on. A certain number of Kachins are enlisted, and make good soldiers.

The men of the Hsün Fang Tui are rather more stupid, but of finer physique and more enduring, than the average Chinese. They are reported to be absolutely tireless, uncomplaining, and unfailingly cheerful. Their marching qualities are very good, and they would probably give a good account of themselves in jungle fighting.

Terms of
service.

The men enlist for an unspecified period, but are supposed to be able to leave the service after three years; they complain that they find it difficult to do so. Commandants keep their hold over the men, by regularly retaining two or three months' pay. This practice keeps down the number of desertions. If a man deserts little or no notice is taken.

Recruits are enlisted on application by the Kuan Tais or Shao Kuans, and endeavours are made to enlist only the physically fit, but there are no conditions as to height, chest measurement, etc. In the T'êng-yüeh Command applicants are numerous and only selected men are enlisted.

Training and
drill.

The training has recently been on Japanese lines. Close and extended order drill, firing exercise, skirmishing and musketry are practised. On the whole the efficiency does not reach a high standard. Parades take place twice daily for an hour



Type of Yün-nan Infantry (Provincial troops).

at a time. Patriotic songs are sung when the men are on the move. Gymnastics are sometimes practised at T'êng-yüeh.

Recruits are said to do three months' training before being admitted to the ranks.

The 11th Ying (on the frontier of Burma) is the only one armed throughout with magazine rifles (9 rounds in magazine under the barrel), and there are probably 500 more of these rifles in the Command, distributed in districts where they are likely to be of most service, *e. g.*, for escorts proceeding into dangerous country. They are of various patterns, all German. Armament.

The remaining Yings are armed with a single-loading Mauser pattern rifle, of German make, sighted to from 1,400 to 1,600 metres, but even these are not universal. Some men of the 2nd Ying are in possession of old flint locks, and this is probably the case in some of the other Yings.

The rifles are all in serviceable condition, and in some cases are well kept.

There are two guns at T'êng-yüeh, but they are said to be useless. There are no gunners nearer than Yun-nan Fu.

The men are dressed in dark-blue blouses, trousers, and putties, of a stout native made cloth. They wear a black cloth waist-band, and a black cap or turban, with sometimes a straw hat on the top of the latter, after the local custom. For footgear they have Chinese sandals, which they make themselves; but they frequently go barefooted. Uniform and equipment.

The coat is sometimes embroidered with the number of the Ying in red thread.

Two sets of clothing, which last for years, are issued to each recruit on his joining. The men get no free issue of blankets.

Each man has a leather cartridge belt with metal clips holding in all about 40 rounds. These belts are always worn when the men are on escort or detached duties.

Proper barracks do not exist for the Hsün Fang Tui; they are generally housed in an old temple or other disused building. Barracks.

At T'êng-yüeh the two Yings are accommodated in two 'Forts' about $\frac{3}{4}$ of a mile south-west of the city. Each is surrounded by a circular wall. The houses inside it are built of sun-dried bricks, on stone foundations, with tiled roofs.

P'êng-yüeh magazine.

Practically all the ammunition in T'êng-yüeh is stored in the Telegraph office. It is all manufactured in Yün-nan Fu Arsenal, where the powder is said to be bad. There are 120,000 rounds of small arm ammunition, 200 rounds gun ammunition. A small amount is kept in the General's Yamen, and in the two barracks, in boxes, or in possession of the men. As there is no turn over of the gun ammunition, it may be taken to be as useless as the guns.

Discipline.

Discipline is enforced by the Kuan Tai and Shao Kuans. The former has power of life and death; the latter award imprisonment, bambooning (constantly practised though forbidden by edict), and extra drills.

Rations.

There are no free rations; rice, tea, salt, and tobacco are sometimes purchased in bulk by the Commandant, and issued to the cooks. The price is deducted from the men's pay, and this practice gives the Commandant an opportunity for a little 'squeeze'.

Administration.

The Hsün Fang Tui in the different Commands are under a Brigadier, who is subordinate to the T'i-t'ai (General) in Ta-li Fu. The office is obtained by purchase, indicating that "squeeze" is still an important factor in the administration. For instance on the first day of each month the Commandant of each Ying at T'êng-yüeh sends ten men to the Brigadier's Yamen to form his guard. These men are immediately dismissed, and the pay for the guard goes into the General's pocket.

Peculation is, however, decreasing, though it appears to be recognized. The appointment of Brigadier is said now to be worth 4,000 taels a year, as against 10,000 taels ten years ago.

The higher authorities, military and civil, are on good terms.

Pay.

The monthly rates of pay are as follows:—

	Taels.
Kuan Tai, Commandant of a Ying ..	100
Shao Kuan, Officers	20
Shih Chang, Non-Commissioned Officers ..	3.9
Ping Ting, privates	3.6

The pay is sent monthly from Yün-nan Fu.

There is no pension, but it is quite possible for the men to live on half the amount of their pay.

There is no hospital or medical officer, even at T'êng-yüeh, Medical, and the men obtain treatment where they can.

FRONTIER POSTS.

Chinese frontier posts garrisoned by Kuo-min-chun (Hsün-fang-tui) exist at the following places:—

(A) In Wei-hsi T'ing district.

A-tun-tzu	..	..	150 men.
Ch'i-tsung	..	..	50 men.
Hsiao-wei-hsi	..	..	20 men.
Wei-hsi T'ing	..	..	30 men.
Chamutong	..	..	60 men.
Yuragan	..	..	50 men.
Chia-ku-ting	..	..	10 men.
Mao-ting	..	..	20 men.
Pe-han-so	..	..	100 men.
La-tsa	..	..	50 men.
Shapa	..	..	60 men.

on left bank of Salween about lat. 26° 45'.

(B) In the T'êng-yüeh Salient from N. to S.

Lu-k'u	..	..	under construction.
Ta-chai	..	..	100 men.
Ying-p'an-kai	..	..	50 men.
Hei-ni-t'ang	..	..	Post and blockhouse ; un-occupied.
Ku-yung-kai	..	..	75 men ; no fort. !
Chih-na-pa	..	..	30 men ; post and block-houses.
Ta-ho	..	..	20 men ; post and block-house.
San-si	..	..	50 men.

Mêng-ka	...	...	50 men ; post and block-house.
Sima-pa	...	...	100 men, post and block-house.
San-ta	..	..	75 men.
Kan-ai ..	..	..	50 men.
T'ai-p'ing-kai	..	..	150 men.
Man-waing	..	..	50 men.
Sha-mu-lung	..	..	50 men.
Ku-li-hka	..	..	10 men.
Lung-ch'uan	..	..	50 men.
Ho-hsa ..	..	..	50 men.
Che-fang	..	..	300 men.
Chang-feng-kai	..	..	75 men.
Loi-lung	..	..	Unoccupied.
Mong-mao	..	..	10 men.

(C) According to the latest information the posts on the War frontier are Hawngro, Lunkum Manawngnam, Long Hkang and Mong Hka. The strength of the garrisons at these places is unknown.

(D) On the Tong-king frontier there are the following posts:

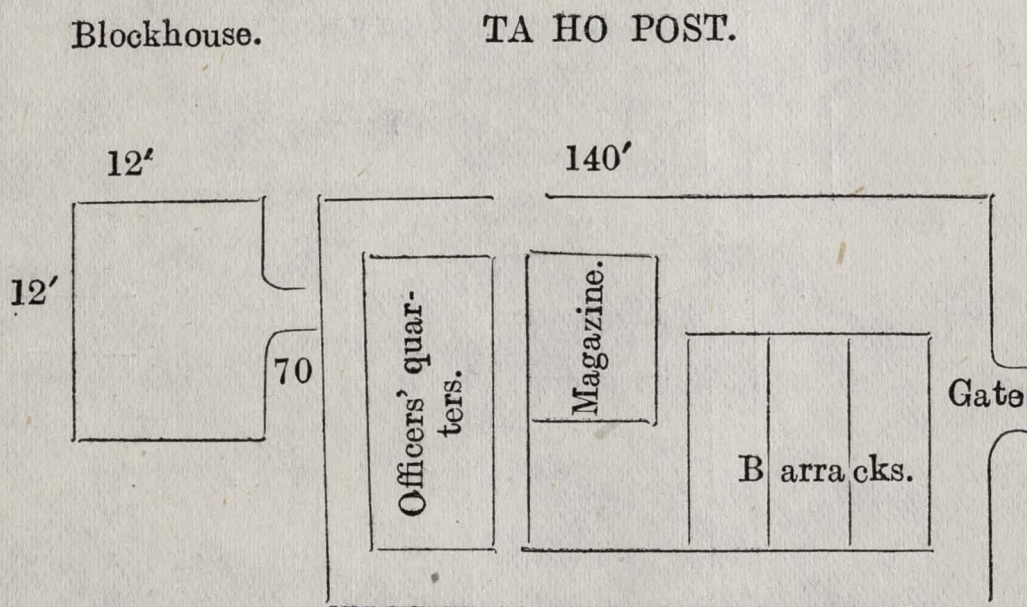
Mao-ping, 30 men.	Tong-kan, 1 Ying.
Hsin-tien, 30 men	Tong-song-ping, 35 men.
Pak-bao, 30 men.	Pa-sat, 30 men.
P'an-chih-hua, 28 men.	Ha-fa, 11 men.
Meng-tung, 20 men.	

Description of
Posts.

Ta Ho Post.—This post is situated about 4 miles east of our boundary pillar No. 37 and about 8 miles from Kam-bai-ti Camp. It is built on top of a fairly steep hill, and there is a block-house on a lower hill about 600 yards from the post. The dimensions of the Post are about 140 feet in length and 70 feet in breadth. The walls round the post are built of sun-dried brick, and are about 12 feet high. They are about 20 inches thick, and the foundations, which are of stone, are about 6

inches below ground level, and a foot above. No mortar has been used in the foundations, but the sun-dried bricks of the walls are set in mud mortar. The tops of the walls are protected by tiles. The buildings in the post are of wood, and have tile roofs.

There are two lines of loopholes at intervals of 6 feet, the lower ones about shoulder high, and the upper about 10 feet from the ground. A plank platform has to be put up for the men to stand on when firing through the upper line of loopholes.



Hei-ni-t'ang Post.—This post is built on a very steep hill overlooking the Hei-ni-t'ang Valley. There is a blockhouse which stands on a small mound situated at a lower level, and

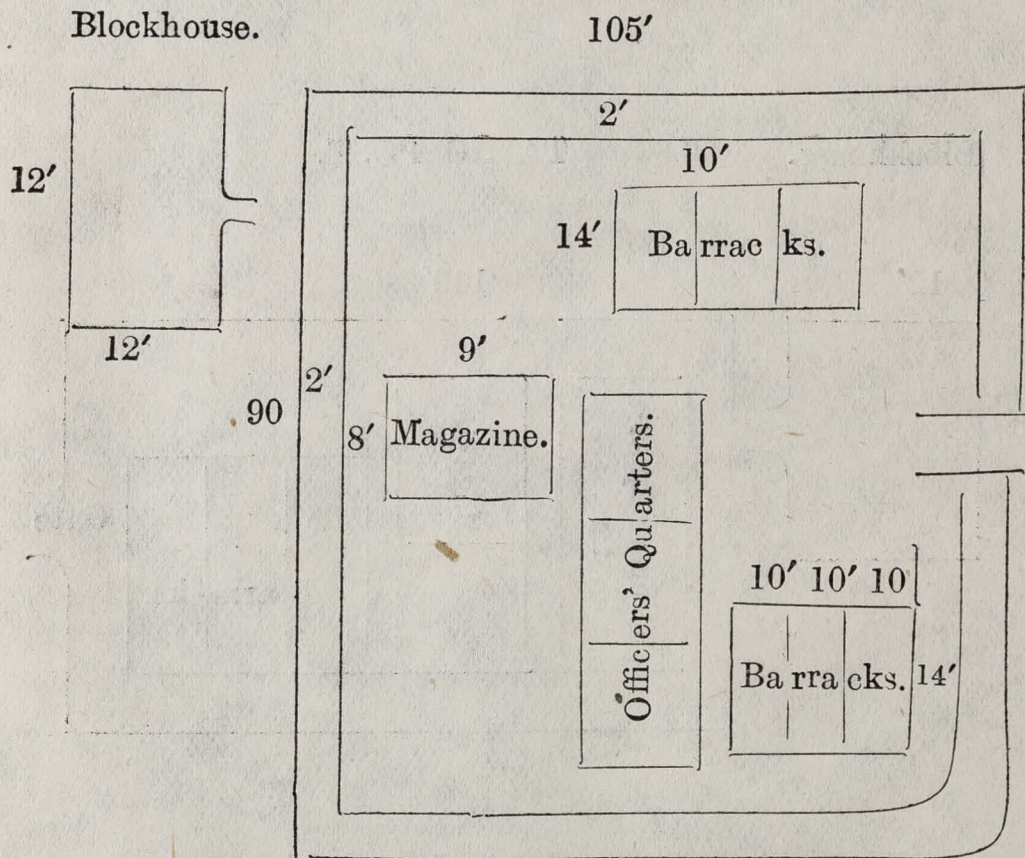
about 300 yards from the Post. The walls and their dimensions are similar to those at Ta Ho Post. There is only one gate, above which a small wooden building is erected to serve as a look-out or Guard Room.

Loopholes as in Ta Ho Post.

The water supply is scanty, and is a good distance down the hill. No doubt a supply of water is kept in the post for emergencies.

The garrison is eventually to consist of 40 Chinese soldiers.

HEI-NI-T'ANG POST.



Chih-na-pa Post.—This Post is built on a hill commanding the Chih-na-Pa valley. In shape and size it is similar to that at Hei-ni-t'ang, and is to accommodate a garrison of 40 men,

Mêng-ka Post.—This post is on a steep hill above the village. Plan of the buildings as at Hei-ni-t'ang. The garrison is to consist of 40 men.

The wooden posts of the buildings of all these posts stand on round stone pedestals, which will keep them proof against white-ants. Only the flooring of the magazines is of wood, the floors of all other buildings being the bare ground, with the exception of those built above the gates. There are no stoves or specially built cooking places for the men, and fire is lit on the ground in the middle of each room.

FORTIFIED TOWNS.

There are in Yün-nan no strongholds which in a military sense could be classed as "fortresses." All towns in the province including those of the 'Hsien', or fourth class, are surrounded by walls of various dimensions. A plain, watered by a river or large stream, is usually selected as the site for the towns and they are built on rising ground overlooking the stream. The towns are generally square, the four sides roughly facing the points of the compass, and are surrounded by a wall of stone blocks, or of brick with stone foundations, usually $1\frac{1}{2}$ to 2 feet thick and from 20 to 40 feet high, the maximum height (in the case of Yün-nan Fu) being 50 feet. On the inside the wall is backed by a parapet of earth reaching to within 5 feet or $4\frac{1}{2}$ feet of the top of the wall and of a thickness varying from 20 feet to a maximum of 60 feet in the case of the capital. The top of the parapet is paved with stone to form a banquette and the wall is crenelated or pierced with embrasures about $1\frac{1}{2}$ feet wide and about 2 yards apart, and in the intervals loopholes are pierced, to permit men to fire kneeling. As a rule the wall is surrounded on the outside by a shallow ditch, generally dry, which would form little obstacle to assault. Each face is pierced by a gateway about 6 yards wide, surmounted by a guard house, entrance to the town being given through bricked-in tunnels pierced through the parapet, which is built thicker near the gateways. At the outer end, the gateways are closed by double doors of wood about 6 inches thick, with thin iron plates bolted on the exterior face. In the case of some of the larger towns the entrances are protected by traverses, consisting of three-sided lengths of stone wall slightly lower than the wall surrounding the city itself. The interior of the town usually contains narrow, paved streets connecting the four gateways, and here the shops are generally found, though in

some cases the business quarter is outside the city, adjoining one of the gateways. Beyond a few yamens and temples there are no large buildings within the city and a good deal of the interior space is usually under cultivation or covered with miserable houses of sun-dried brick.

CHAPTER V—APPENDIX I.

DETAILS OF ESTABLISHMENTS.

Staff of one Army Corps (Chün).

1 Chêng Tu T'ung	..	General.—New official title.
Tsung T'ung Kuan	..	New unofficial title.
T'i Tu or T'itai	..	Old title.
1 Tsung T'san Mou Kuan.		Chief Staff Officer.
2 I Têng T'san Mou Kuan.		Sub-Chiefs of staff.
2 Êrh Têng T'san Mou Kuan.		2nd class staff officers.
1 P'ao Tui Hsieh Ling Kuan.		Brigadier General of Artillery.
1 Kung Ch'êng Tui T'san Ling Kuan.		Commanding Engineers.
1 Hu Chün Kuan	..	A.-D.-C. (with rank of Colonel).
1 Chih Shih Kuan.	..	A.-D.-C. (with rank of Captain).
4 I Têng Shu Chi Kuan	..	Military Secretaries (rank Lieutenant-Colonel).
1 Tsung Chih Fa Kuan	..	Judge Advocate General (rank Colonel).
1 Tsung Chün Hsü Kuan.		Chief Paymaster (rank Colonel).
1 Tsung Chün Hsieh Kuan.		Chief Ordnance Store Officer (rank Colonel).
1 Tsung Chün I Kuan	..	Principal Medical Officer (rank Colonel).
1 Tsung Ma I Kuan	..	Chief Veterinary Officer (rank Colonel).
5 Shu Chi Chang	..	Assistant Military Secretaries (rank Lieutenant).
3 Ssü Shih Shêng	..	Accountants (rank Lieutenant).

15 Ssŭ Shu Shêng	..	Clerks (rank 2nd Lieutenant).
1 Chi Ch'a Kuan	..	Provost-marshal (rank Captain).
3 Pien Mu or Ch'uan Ling Ma Ping.	..	Chief Mounted orderlies (rank Sergeant).
30 Ma Pien	..	Mounted orderlies
6 Hu Mu	..	Chief orderlies (unmounted).
60 Hu Ping or Ch'uan Ling Ping.	..	Orderlies (unmounted).
9 Huo Fu	..	Cooks (for orderlies).
33 Ch'i Ma	..	Riding horses (for mounted orderlies).

Staff for one Division (Chên).

1 T'ung Chih-Kuan	..	General.
1 Chêng ts'an mou kuan.		Chief of Staff.
1 Erh têng ts'an mou kuan.		2nd class Staff Officer.
1 San têng ts'an mou kuan.		3rd class Staff Officer.
1 Chung chün kuan	..	Aide-de-Camp.
1 Caih shih kuan	..	Assistant Aide-de-Camp.
3 I têng shu chi kuan	..	1st class Secretary.
1 Chêng chih fa kuan	..	Dy. Judge-Advocate.
1 Chêng chün hsü kuan	..	Chief Accountant.
1 Chêng chün hsieh kuan.	..	Chief Ordnance Officer.
1 Chêng chün i kuan	..	Principal Medical Officer.
1 Chêng ma i kuan	..	Principal Veterinary Officer.
1 Ssŭ hao kuan	..	Lieutenant—transmits orders (in charge of buglers).
7 Shu chi chang	..	4th class Secretaries, (rank Lieutenant).
5 Ssŭ shih shêng	..	Accountants (rank Lieutenant).
15 Ssŭ shu shêng	..	Clerks (rank 2nd Lieutenant).
1 Pien mu	..	Chief Mounted Orderly.

16 Ma pien	..	..	..	Mounted Orderlies.
3 Hu mu	..	..	..	Chief Orderly (unmounted).
30 Hu ping	..	..	..	Orderlies (unmounted).
5 Huo fu	..	..	..	Cooks for Orderlies.
17 Ch'i ma	..	..	..	Riding horses.

N. B.—There were, in 1912, in Yun-nan Fu, 4 Military Advisers, *viz.*—

			<i>Name.</i>	<i>Native Province.</i>	
1 of 1st class	..	..	An	Yün-nan	8 years in Japan.
2 of 2nd class	..	..	Wu and Liang.	Both of Peking.	
of 3rd class	..	..	Liu	Peking.	

Staff of one Brigade (Hsieh).

1 T'ung ling kuan	..	..	Brigadier General.
1 Ts'an chun kuan	..	..	Aide-de-Camp to Brigadier-General with rank of Major.
1 Chih shih kuan	..	..	Aide-de-Camp (rank Capt.).
2 Erh têng shu chi kuan	..	..	2nd class Secretaries, (rank Major).
2 Ssü shu shêng	..	..	Clerks.
1 Ssü hao chang	..	..	Transmits orders. Bugler officer (rank 2nd Lieutenant).
1 Pien mu	..	..	Chief Mounted Orderly
6 Ma pien	..	..	Mounted Orderlies.
1 Hu mu	..	..	Chief Orderly (unmounted).
10 Hu ping	..	..	Orderlies (unmounted).
2 Huo fu	..	..	Cooks for orderlies.
2 Ch'i ma	..	..	Riding horses.

Staff of one regiment (piao).

- | | | | |
|-------------------------|----|----|---|
| 1 T'ung tai kuan | .. | .. | Colonel. |
| 1 Chiao lien kuan | .. | .. | This officer appears to be a sort of Adjutant. He is usually young, but has rank of Lieutenant-Colonel. He imparts most of the instruction. |
| 1 Chih shih kuan | .. | .. | Aide-de-Camp (rank Captain). |
| 1 Chang ch'i kuan | .. | .. | Signalling Officer (rank Lieutenant). |
| 1 Fu chün hsü kuan | .. | .. | Assistant Accountant (rank Major). |
| 1 Fu chün hsieh kuan | .. | .. | Assistant Ordnance Officer. (rank Major). |
| 1 Fu chün i kuan | .. | .. | Assistant Surgeon (rank Major). |
| 1 Fu ma i kuan | .. | .. | Assistant Veterinary Surgeon (rank Captain). |
| 1 Ssu hao chang | .. | .. | Transmits orders (rank 2nd Lieutenant). |
| 2 Erh têng shu chi kuan | .. | .. | 2nd class Secretary (rank Major). |
| 2 Ssü shu shêng | .. | .. | Clerk (rank 2nd Lieutenant). |
| 1 Pien mu | .. | .. | Chief Mounted Orderly. |
| 4 Ma pien | .. | .. | Mounted Orderlies. |
| 1 Hu mu | .. | .. | Chief Orderly (unmounted). |
| 8 Hu ping | .. | .. | Orderlies (unmounted). |
| 2 Huo fu | .. | .. | Cooks for orderlies. |

Bureau of Treasury and Supply (for one Division).

- 1 Director.
- 2 Assistant Directors.
- 2 Commissariat Officers.
- 2 Paymasters.

- 1 3rd Class Secretary.
- 2 Clerks.
- 1 Head Orderly (unmounted).
- 6 Orderlies.
- 1 Cook.

Ordnance Bureau (for one Division).

- 1 Director.
- 1 Inspector of Ordnance.
- 1 Ordnance Storekeeper.
- 1 3rd Class Secretary.
- 1 Assistant Accountant.
- 1 Clerk.
- 1 Head Orderly (Unmounted).
- 4 Orderlies.
- 1 Head workman.
- 9 Armourers.
- 1 Store watchman (Head).
- 9 Store watchmen.
- 5 Cooks.

Army Medical Service (for one Division).

- 1 Doctor.
- 1 Staff Surgeon (rank Lieutenant-Colonel).
- 1 Surgeon (rank Captain).
- 5 Surgeons (rank Lieutenant).
- 1 Veterinary Surgeon (rank Major).
- 2 Head Hospital Orderlies.
- 1 Apothecary (rank Captain).
- 1 3rd class Secretary.
- 1 Clerk.
- 1 Head Orderly (unmounted).
- 3 Orderlies.
- 20 Hospital Orderlies.
- 3 Cooks.

Battalion of Infantry.

1 Kuan tai kuan	..	..	Major.
1 Tu tui kuan	..	..	Senior Captain.
4 Tui kuan	..	..	Captain.
12 P'ai chang	..	..	Lieutenant.
4 Ssü wu chang	..	..	2nd Lieutenant. One to each company to manage its various affairs. He appears to be a sort of Company Sergeant-Major, but has officer's rank.
36 Chêng mu	..	..	Sergeants.
36 Fu mu	..	..	Corporals.
14 Chêng ping	..	..	1st Class Privates.
288 Fu ping	..	..	2nd Class Privates.
1 Chün hsü chang	..	..	Accountant (rank Captain).
1 Chün-i	..	..	Surgeon (rank Captain).
1 I sheng	..	..	Surgeon (rank Lieutenant).
1 Shü chi chang	..	..	4th Class Secretary (rank Lieutenant).
6 Ssü shu shêng	..	..	Clerks (rank 2nd Lieutenant).
1 Hao mu	..	..	Chief Bugler.
8 Hao ping	..	..	Buglers.
1 Hu mu	..	..	Chief Orderly (unmounted).
18 Hu Ping	..	..	Orderlies (unmounted).
1 Chiang mu	..	..	Head workman.
4 Ch'iang chian	..	..	Armourers.
4 P'i chiang	..	..	Leather workers.
4 I Ping	..	..	Hospital orderlies.
36 Pei pu ping	..	..	"Supplementary" soldiers, i.e., one to each p'êng in peace time—takes the place of any other soldier who is missing, and in time of war looks after tents and baggage.

38	Huo fu	..	..	..	Cooks.
4	Chia ch'ê ping	..	..	..	Drivers.
4	Wei yang fu	..	..	..	Feeder of horses.
4	Sui ying ch'ê	..	..	..	Carts.
12	Chia ch'ê lo	..	..	..	Mules.

A Ying of Cavalry.

1	Kuan tai kuan	..	..	..	Major.
1	Tu tui kuan	..	..	..	Senior Captain.
4	Tui Kuan	..	..	..	Captain.
8	P'ai chang	..	..	..	Lieutenant.
1	Ssu wu chang	..	..	..	2nd Lieutenant.
16	Chêng mu	..	..	..	Sergeants.
16	Fu mu	..	..	..	Corporals.
64	Cheng ping	..	..	..	1st Class Troopers.
128	Fu ping	..	..	..	2nd Class Troopers.
1	Chün shu chang	..	..	..	Accountant (rank Captain).
1	Chün i chang	..	..	..	Surgeon (rank Captain).
1	Ch'a ma chang	..	..	..	Inspector of horses (rank Captain).
1	Ma i chang	..	..	..	Veterinary Surgeon (rank Lieutenant).
1	Shu chi chang	..	..	..	4th Class Secretary.
6	Ssü shu shêng	..	..	..	Clerks (rank 2nd Lieutenant).
1	Hao mu	..	..	..	Chief Bugler.
8	Hao ping	..	..	..	Bugler.
1	Hu mu	..	..	..	Chief Orderly (unmounted).
12	Hu ping	..	..	..	Orderlies (unmounted).
1	Chiang mu	..	..	..	Head workman.
2	Ch'iang chiang	..	..	..	Armourers.
4	Chang chiang	..	..	..	Farriers.
2	P'i chiang	..	..	..	Saddlers.
4	I ping	..	..	..	Hospital Orderlies.

16 Pei pu ping	..	..	"Supplementary" soldiers.
18 Huo fu	..	..	Cooks.
4 Chia ch'ê ping	..	..	Drivers.
4 Wei yang fu	..	..	Feeders of horses.
4 Ma fu mu	..	..	Head grooms.
32 Ma fu	..	..	Grooms.
260 Troop horses and chargers			(14 more on active service).
4 Carts with 12 horses.			

Battalion of Artillery (Mountain).

1 Kuan tai	..	..	Major.
1 Tu tui kuan	..	..	Senior Captain.
3 Tui kuan	..	..	Captains.
9 P'ai chang	..	..	Lieutenants.
3 Ssu wu chang	..	..	2nd Lieutenants.
27 Chêng mu.	..	..	Sergeants.
27 Fu mu	..	..	Corporals.
108 Chêng ping	..	..	1st Class Gunners.
216 Fu ping	..	..	2nd Class Gunners.
1 Accountant	..	..	(rank Captain).
1 Ordnance Officer,			
1 Surgeon	..	..	(rank Captain).
1 Surgeon	..	..	(rank Lieutenant).
1 Inspector of horses,			
1 Veterinary Surgeon	..	..	(rank Lieutenant).
1 Veterinary Surgeon	..	..	(rank 2nd Lieutenant).
1 4th class Secretary	..	..	(rank Lieutenant).
5 Clerks	..	..	(rank 2nd Lieutenant).
1 Chief Bugler,			
6 Buglers.			
1 Chief Orderly.			
18 Orderlies.			
1 Head workman,			

- | | | |
|---|----|----------------------------------|
| 3 T'ieh chiang .. | .. | Blacksmiths. |
| 3 P'ao chiang .. | .. | Armourers. |
| 6 Farriers. | | |
| 3 Mu chiang .. | .. | Carpenters. |
| 3 Saddlers. | | |
| 3 Hospital Orderlies. | | |
| 27 Supplementary Gunners. | | |
| 31 Cooks. | | |
| *18 Kuan t'o ping. | | Drivers for baggage horses, etc. |
| *18 Horse feeders. | | |
| *3 Head grooms. | | |
| 39 Grooms. | | |
| 18 P'ao. | | Guns. |
| 18 Ammunition wagons. | | |
| 3 Forge wagons. | | |
| 3 Spare forge wagons. | | |
| 9 Extra ammunition wagons. | | |
| 6 Baggage carts. | | |
| 216 Horses for guns and ammunition wagons (6 to each gun or wagon). | | |
| 36 horses for forge and spare wagons (on active service only). | | |
| 36 reserve horses. | | |
| 50 riding horses (increased to 96 on active service). | | |
| 18 mules for baggage carts (increased to 36 on active service). | | |
| 54 horses for the extra ammunition wagons (on active service only). | | |
| * Doubled on active service. | | |

Battalion of Engineers.

- | | | |
|------------------|----|-----------------|
| 1 Kuan tai .. | .. | Major. |
| 1 Tu tui kuan .. | .. | Senior Captain. |
| 4 Tui Kuan .. | .. | Captains. |

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12 P'ai chang	Lieutenant.
4 Ssü wu chang	2nd Lieutenants.
36 Chêng mu	Sergeants.
36 Fu mu	..	..	Corporals.
144 Chêng ping	..	..	1st Class Privates.
288 Fu ping	..	..	2nd Class Privates.
1 Accountant	..	..	(rank Captain).
1 Surgeon	..	..	(rank Captain).
1 Surgeon	..	..	(rank Lieutenant).
1 4th Class Secretary.			
6 Clerks.			
1 Chief Bugler.			
8 Buglers.			
1 Chief Orderly (unmounted).			
18 Orderlies.			
1 Head workman.			
4 Armourers.			
4 Blacksmiths.			
4 Carpenters.			
2 Saddlers.			
4 Hospital Orderlies.			
36 Supplementary soldiers.			
40 Cooks.			
4 Drivers.			
4 Horse feeders.			
4 Baggage carts.			
12 Mules for carts.			

Transport (Tzu Chung Tui) Battalion

1 Kuan tai	..	..	Major.
1 Tu tui kuan	..	..	Senior Captain.
4 Tui kuan	..	..	Captains.

12 P'ai chang	..	..	Lieutenants.
4 Ssü wu chang	..	..	2nd Lieutenants
36 Chêng mu	..	..	Sergeants.
36 Fu mu	..	..	Corporals.
144 Chêng ping	..	..	1st Class Privates.
288 Fu ping	..	..	2nd Class Privates.
1 Accountant			(rank Captain).
1 Surgeon			(rank Captain).
1 Surgeon			(rank Lieutenant).
2 Inspectors			of horses.
1 Ma i chang			(Veterinary Lieutenant).
1 Ma i shêng			(Veterinary 2nd Lieutenant).
1 4th class			Secretary.
6 Clerks.			
1 Chief Bugler.			
8 Buglers.			
1 Chief Orderly			(unmounted).
18 Orderlies.			
1 Head workman.			
2 Armourers.			
4 Blacksmiths.			
4 Carpenters.			
2 Saddlers.			
4 Hospital Orderlies.			
36 Supplementary soldiers.			
8 Farriers.			
41 Cooks.			
8 Chief grooms.			
72 Grooms.			
72 Transport carts			(Tzu chung ch'ê).
101 Horses.			
216 Mules.			

Orderlies.

Ma Ping and Fu Ping are orderlies, the former being mounted. In the General's Yamen are 16 of the former and 60 of the latter. Only 50 per cent are armed, and they with the usual pattern rifle. Kit is the same as the soldier's with shoulder straps, denoting "Ma or Fu" "Ping". In the Brigadier General's Yamens there are half the above number.

Each T'ung tai has	{ 4 Ma Ping.
	{ 8 Fu Ping.
Each Kuan tai	8 Fu ping.
Each Tu tui kuan and Tui kuan. ..	1 Fu Ping.

CHAPTER V—APPENDIX II.

Badges of rank (Officers).

General—3 buttons and 2 black stripes on each sleeve.

Brigadier-General—3 buttons and 1 black stripe on each sleeve.

Tung tai—3 buttons and 3 black stripes on each sleeve.

Lieutenant-Colonel or Chiao lien kuan ping chieh—2 buttons and 2 black stripes on each sleeve.

Kuan tai—2 buttons and 1 black stripe on each sleeve.

Tu tui kuan and Tui kuan—1 button and 3 black stripes on each sleeve.

P'ai-chang—1 button and 2 black stripes on each sleeve.

Ssü-wu-chang—1 button and 1 black stripe on each sleeve.

Staff Officers.

Buttons according to rank, but blue stripes.

Non-Commissioned Officers.

Cheng Mu and Fu Mu have 3 stripes on their caps.

Stripes (on coat sleeves) distinguishing Departments.

Pay Department	..	Black stripe below the others.
Medical Department	..	Light Blue.
Infantry	..	Red.
Artillery	..	Yellow.
Cavalry	..	White.
Advisory	..	Red with 3 rings.
Judicial Department	..	Yellowish.
Engineers	..	Shoulder straps dark blue.
Transport	..	Brick red.

Note.—A new set of dress regulations was issued in November 1912. Alterations may have been introduced subsequent to the revolution.

CHAPTER V—APPENDIX III.

PAY AND ALLOWANCES.

	Pay.	Allow- ances.	Total.
	Taels.	Taels.	Taels.
General	600	1000	1600
Major-General or T'ung chih	400	600	1,000
T'ung ling (official for Hsieh t'ung) ..	250	250	500
T'ung tai (official Piao t'ung)	200	200	400
P'ao tu hsieh-ling, i.e., Artillery Brigadier-General on active service only.	250	..	250
Kung ch'ang tui ts'an ling (on active service only) Colonel Engineer	200	..	200
Kuan tai—Transport, Infantry, Engineer	100	140	240
Kuan tai—Cavalry	100	80	180
Kuan tai—Artillery	100	160	260
Tu tui kuan	50	..	50
Tui kuan—Infantry, Engineers, Transport	50	10	60
Tui kuan—Cavalry	50	8	58
Tui kuan—Artillery	50	14	64
Tui kuan—Band	50	..	50
Chief Staff Officer	200	..	200
2nd Staff Officer	100	..	100
3rd Staff Officer	50	..	50
A.-D.-C. to General	100	..	100
A.-D.-C. to Brigadier-General	80	..	80
A.-D.-C. to Piao T'ung	50	..	50
Directors of Bureaus	160	80	240

	Pay.	Allow- ance.	Total.
	Taels.	Taels.	Taels.
Chief Judge	100	..	..
Chief Accountant	100	..	..
Chief Ordnance Officer	100	..	..
Chief Staff Surgeon	100	..	..
Chief Veterinary Surgeon (ranks as Major) ..	80	..	..
Assistant Accountant	60	..	..
Assistant Ordnance Officer	60	..	..
Assistant Surgeon	60	..	..
Assistant Veterinary Surgeon	40	..	..
Officer in charge of Signallers	30	..	..
Bugler officer	24	..	..
1st Secretary	60	..	..
2nd Secretary	40	..	..
3rd Secretary	30	..	..
P'ai chang	25	..	..
Ssu wu chang	20	..	..
Accountant (rank Captain)	30	..	..
Ordnance Officer (rank Captain)	30	..	..
Surgeon (rank Captain)	40	..	..
Veterinary Surgeon (rank Lieutenant)	30	..	..
Inspector of Horses	30	..	..
Bugler officer (rank 2nd-Lieutenant)	16	..	..
4th Secretary	24	..	..
Surgeon (rank Lieutenant)	24	..	..
Veterinary Surgeon (rank 2nd-Lieutenant)	20	..	..
Accountant (rank 2nd-Lieutenant)	16	..	..
Clerk	12	..	..
Head Mounted Orderly	10.5	..	..

	Pay.	Allow- ances.	Totals.
	Taels.	Taels.	Taels.
Cheng mu (Sergeant)	5·1	..	..
Fu mu (Corporal)	4·8	..	..
Head Orderly (unmounted) (Sergeant) ..	6	..	..
Head Bugler (Sergeant)	6	..	..
Head Hospital Orderly	12	..	..
Head Workman	9	..	..
Head Groom	4·5	..	..
Mounted Orderly	8·4	..	..
1st class Private	4·5	..	..
2nd class Private	4·2	..	..
Supplementary Private	3·3	..	..
Orderly	4·5	..	..
Bugler	4·5	..	..
Hospital Orderly	4·2	..	..
1st class Bandsman	10·5	..	..
2nd class Bandsman	8·4	..	..
3rd class Bandsman	6	..	..
Band Student	4·5	..	..
Driver	4·5	..	..
Armourer	6·6	..	..
Gun armourer	6·6	..	..
Farrier	4·5	..	..
Carpenter	4·5	..	..
Saddler	4·5	..	..
Cook	3·3	..	..
Groom	3·3	..	..
Horse feeder	3·3	..	..

N.B.—For feed of each horse, repairs to saddlery, etc., Kuan Tais draw 5·04 Ts *per mensem*. In the Artillery 5 Ts. per gun.

CHAPTER VI.

Civil Administration.

The family system is the basis of Chinese civil administration: groups of families constitute villages and even towns. Their respective heads are held responsible for all individuals. The official hierarchy begins with the Chih-Hsien who administers a district, or Hsien, of the fourth class, Chou's are districts of the third class and T'ing's districts of the second class. Each of these districts contains a town whose name ends with one of the "titles" as a suffix; *e.g.*, Yün-nan Hsien, Yün Chou, Lung-ling T'ing.

A group of such districts constitutes a Fu or first class district administered by a Fu-Kuan, whose place of residence is denoted by the suffix Fu; *e.g.*, Ta-li Fu. A group of Fuses is administered by a Tao-T'ai or Intendant of Circuit, of whom there are 6 in Yün-nan. This system does not however obtain in every case, for a certain number of Chou Kuans and T'ing-Kuans deal direct with Tao T'ais.

The superior administration of the province has undergone considerable changes of late owing to the political upheaval.

Formerly the provinces were governed by Viceroys (*Tsung-tu* or *Chih-t'ai*) or by Governors (*Hsün-fu* or *Fu-t'ai*). In some cases two or three provinces were grouped together under one Viceroy. This was so in the case of Yün-nan, which with Kuei-chou formed the Yün-Kuei Viceroyalty. Kuei-chou had also its own Governor, while the Yün-Kuei Viceroy resided at Yün-nan Fu and combined in his own person the offices of Viceroy of the two provinces and Governor of Yün-nan.

Under the Viceroy was a board of administration consisting of—

The Fan-T'ai or Treasurer.

(73)

Nieh-T'ai or Judicial Commissioner.

Liang-Tao or Commissioner of taxes.

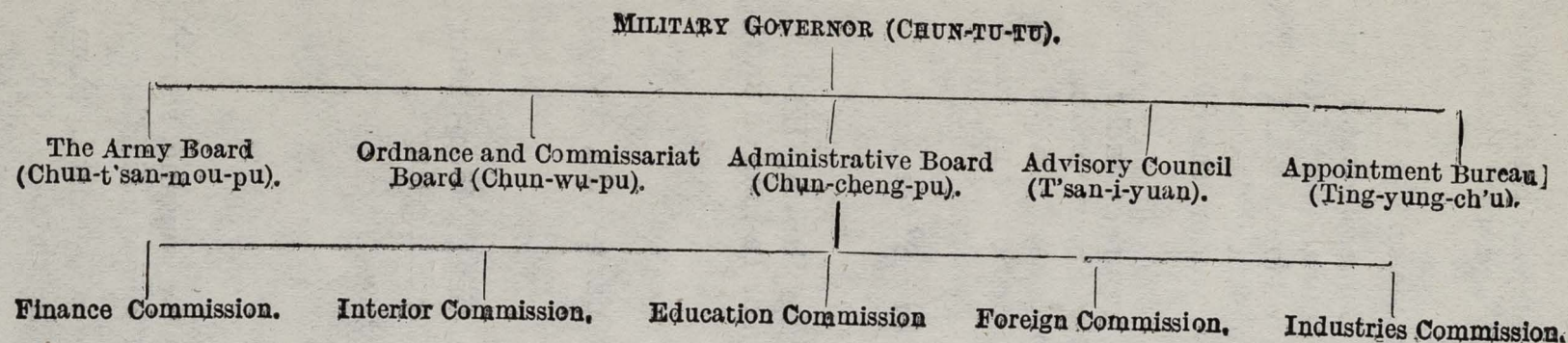
Yen-Tao or Salt Commissioner.

All officials are generally referred to rather loosely by foreigners as Mandarins.

Admission to official appointments is or was gained through competitive examinations. There is no special training for any department. The term of office is generally three years and officials used not to be allowed to hold office in their own provinces.

In October 1909 the Provincial Assembly of Yün-nan was formed. There were 68 members, 4 or more from each prefecture. Yün-nan Fu returned 10. The members were to be paid for their services and the debates were to be published. The Viceroy sat as President.

At the beginning of the Revolution a Provisional Government was formed whose head was given the title of President, the only remarkable feature was the inclusion of many Yün-nanese officials. In December 1911 this government was dispraced by one having a military character. The head being a military Governor or Chün-tu-tu. The present organization of the Government departments is as follows:—



1. The Army Board deals only with Military affairs.
- 2 The Ordnance and Commissariat Board is concerned with questions of supply. The Salt Official has been merged into this establishment.
3. The Administrative Board deals with the Civil administration of the Province.
4. In addition to the above there has been established a Provincial Judicial High Court; consisting of a Chief Justice, Procurator-General, Assistant Judge and Procurator.
5. There is also a Deputy Governor who has lately been transferred to Ta-li Fu and commands the Troops in Western Yün-nan.

Note.—The word " Pu " signifies a body having executive or punitive powers.

In 1913 Lo P'ei-chun, a native of Yün-nan, was appointed Civil Administrator; in June he had not yet taken over his duties from General T'sai Ao, the Military Governor.

In Yün-nan there are 6 Tao-t'ais and 14 Fu-kuans.

In addition there are, or were, various officials bearing the title of Tao-t'ai, notably the Salt official and the Frontier Deputy.

The Administration of the Shan States.

In the time of the Burmese wars the Chinese established military posts in the Shan States. The commanders of these developed into local authorities and were known as Fu-yi (Restrainer of the Barbarians). These have either died out or have become merged into the *Sawbwas* by whom the Shans are now administered.

These *Sawbwas* (Chinese T'u-sü) are grouped under the nearest Chinese officials. They are mostly Shans by birth. The Chinese have lately shown a desire to control the Shans more directly, especially those in the south or Sip Song Panna who have given a good deal of trouble.

Administrative Divisions of the Shan States.

Under the *T'ing* of T'êng-yüeh —

Mong-ti (Nan-tien), Möng-na (Kan-ai), San-ta, Ho-hsa, La-hsa, Möng-wan, (Lung-ch'uan or Ta-lung ch'uan), Möng Mac, and San-si.

Under the *T'ing* of Lung-ling —

Möng-hko (Lu-chiang), Möng-khwan (Mang-shih), Se-fang (Che-fang).

Under *Fu* of Yung-ch'ang —

Möng-htong (Ta-mêng-t'ung or Wan-tien), Möng-chêng, (Chên-K'ang), Möng-ting (Hun-ting or Mêng-ting).

Under *Fu* of Shun-ning.

Kêng-ma, Mêng-mêng —

Under *T'ing* of Ssü-mao.

Keng-hung.

The above 17 States are recognised as self-governing, though they are under the superintendence of Chinese officials.

The following States, though *Sawbwas* still exist in them, have been largely absorbed into Chinese districts.

Under Chên-pien *T'ing Kuan*—

Mêng-ko (including Mêng-sung and Mông-tum or Mêng-tung), Mông lem (a great part has been absorbed into the districts of Chên-pien and Chen-k'ang).

Under the Wei-yuan *T'ing kuan*—

Mêng-pan, Mông-waw (Wei-yuan), Mêng-ka, Waw myet.

Foreign Representatives.

At Yün-nan Fu there is a British consul-general and at T'êng-yüeh a consul. The French have consular officials at Yün-nan Fu and at Mêng-tzü.

Financial System.

Land tax is paid to the Government as soon as the crops are harvested. Land is held under common tenure involving payment of land tax, supply of labour to the authorities, and a fine on alienation.

Besides the land tax, $1\frac{1}{2}$ per cent on all the harvest is paid, sometimes in kind, but generally in money. It is collected in the autumn immediately after the reaping of the rice and wheat crops. Uncultivated land, even though used for grazing, is not taxed.

A tax is collected by the magistrate of each district on the sale or slaughter of horses, oxen, etc., for food.

The production of salt in Yün-nan is a Government monopoly. By article XI of the Convention of March 1894, the importation of salt from Burma was prohibited. Salt, however, may be imported to T'êng-yüeh but may be carried no further. A good deal of foreign salt enters Yün-nan as contraband.

Taxation in the Shan States is farmed out to the head of each village. The *Sawbwas* assess a yearly tax for which the headman is responsible, the latter collects a sum from each house or family according to the proportion of land belonging to it. There appear to be no other taxes, direct or indirect, levied either by the *Sawbwa* or the Chinese Government.

Import duties are levied on foreign goods entering Yün-nan. These are of three kinds, Imperial Maritime Customs, *Likin* and *Fu-shui*.

There are Imperial Maritime Customs stations under the supervision of European officers at Mêng-tzü, Ssü-mao, and

T'êng-yüeh. The rates paid are 5 % *ad valorem* import duty, and $2\frac{1}{2}$ % for a transit pass which frees goods from further duties while in transit to their destination. The dues collected are remitted direct to the Central Government and do not pass through the Provincial Exchequer.

Likin is a provincial transit tax collected at fixed points on the main routes. The tax is farmed out to an official who must return a stated sum to the provincial treasury, the balance going into his pocket. In Yün-nan one *likin* payment is supposed to free goods all over the province. The tariff varies from $3\frac{1}{2}$ to 10 per cent. but is constantly changing.

Fu-shui is a tax imposed by the *Fu-kuan*; is purely local and varies from six annas to one rupee eight annas a mule load.

Imperial Customs, *Likin*, and *Fu-shui* are levied on exports as well as imports.

In T'êng-yüeh a mule and coolie tax has been instituted principally for the upkeep of the Bhamo-T'êng-yüeh road.

The rate is $\frac{1}{2}$ tael per imported mule load and $\frac{1}{4}$ tael per exported mule load: and a quarter of these amounts per coolie load.

WEIGHTS AND MEASURES.

Weight.

1 <i>Tan</i> (<i>Shih</i>)	=100 <i>Chin</i> .
1 <i>Chin</i> (<i>Catty</i>)	= 16 <i>Liang</i> .
1 <i>Liang</i> (<i>Tael</i>)	= 10 <i>Ch'ien</i> .
1 <i>Ch'ien</i> (<i>Mace</i>)	= 10 <i>Fên</i> .
1 <i>Fên</i> (<i>Canlarin</i>)	= 10 <i>Li</i> .

1 *Shih*=133.3 lbs. 1 *Catty* =1.3 lbs. The *Liang* varies but the Imperial Maritime Customs *liang*=582.9 grains. 1 *Ch'ien*=58.29 grains. 1 *Fên*=5.82 grains and the *Li*=.582 grains. 1 *Liang*= $1\frac{1}{3}$ oz. silver, say 2s. 6d.

Lineal Measure.

10 <i>Fên</i>	=1 <i>Ts'un</i>	=1.41 inches.
10 <i>Ts'un</i>	=1 <i>Ch'ih</i>	=14.1 inches.
5 <i>Ch'ih</i>	=1 <i>Pu</i>	=70.5 inches.
2 <i>Pu</i>	=1 <i>Chang</i>	=14.3 feet, but the

trade tariff *chang* is 141 inches.

The *Ch'ih* varies according to locality and trade.

The standard of distance is the *li* which is 1,826 English feet. It is divided into 360 *Kangs*. One *Kang* is 60.5 inches.

In common usage the *li* varies with the difficulty of the road and the state of the weather. Ten *li* may be taken as an hour's journey. An average day's march over ordinary country may be reckoned as 70 or 80 *li*.

The *Mou* or Chinese acre is equal to about $\frac{1}{6}$ th English acre and is divided into 240 square *Pu*, while 100 *mou* make 1 *Ch'ing*.

Liquid Measure.

10 *Hō* = 1 *Shêng* = .96 pint.

10 *Shêng* = 1 *Tou*.

10 *Tou* = 1 *Shih*.

Hay is sold by the load (mule or coolie), wine and milk often by weight, and corn by the liquid measure.

Money.

The Chinese money system is extremely complicated from a foreigner's point of view. The whole matter is influenced by the dislike of the Chinese for any system of tokens. Their currency is a silver one and the value of their coins varies with the value of silver. Also the silver is of different qualities and varies in value accordingly.

The silver *tael* or *liang* (Chinese ounce or $1\frac{1}{3}$ English ounces) is the official unit of currency. The silver is cast in ingots of from 1 to 10 *taels* and is chopped up as required.

The value of a *tael* subject to variations of silver and the quality of the metal, is approximately 2s. 6d. Theoretically there are 1,000 *cash* to 1 *tael*. These are copper coins pierced and carried on strings of nominally 1,000 or *tiao*, 100 or *pai*, 10 or *shih*. The number of *cash* to a *tiao*, *pai* or *shih* varies in different places and times; e. g., in 1910 in Yün-nan Fu, 98 *cash* and in T'êng-yüeh 90 *cash*, equalled one *pai*.

The *tael* is also divided into 10 *ch'ien* or mace, the *ch'ien* into 10 *fên* or candarin. 1 *Fên* = 10 *cash*.

The only coins in this currency are *taels* and *cash*.

The dollar currency is an unofficial one, the dollar being of a different standard in different provinces. The dollar is a silver coin and the currency consists of 50, 20, 10, and 5 cent. silver pieces and copper 1 cent pieces.

The value of the dollar is about 1s. 10d. but its value varies in proportion to the *tael* as well as in proportion to the value of silver. The ratio is decided by the bankers and merchants. At present therefore when exchanging say £ 10 into dollars the value of the *tael* and the ratio of the *tael* to the dollar have to be ascertained.

e. g., if a *tael* = 2s. 6d. and ratio of *tael* to dollar is 72 to 100, then £ 10 = 80 *taels*, and $80 \text{ taels} = \frac{80 \times 100}{72} \text{ dollars} = \frac{1,000}{9} = 111.1 \text{ dollars}$.

An additional complication exists owing to the proportion of dollars to cents not being constant. For example a dollar will sometimes be worth 11 ten cent pieces.

Other coins in circulation are the *piastres de commerce* in the south-east of the province and the Indian *rupee* in the west—the rupee generally exchanges for about 7 *Ch'ien*.

Indian coinage, expressed as follows:—

1 Rupee = 1 Yüan Yang
Ch'ien.

12 Annas = San Ch'ien	..	} The words Yin-Tzu are often used in addition; e.g., San Ch'ien Yin-Tzü.
8 annas = Liang Ch'ien	..	
4 annas = 1 Ch'ien	..	
2 annas = Wu Fen	..	
1 anna = 1 Pai.	..	

Opium and salt measured by weight are largely used in the outlying districts.

In 1907 a mint was established at Yün-nan Fu where the dollar coinage can be made.

Along the main route from the capital to Sui-fu money can be remitted with great facility. From Han-kow to Ch'ung-king money is remitted by draft through a Chinese bank. West of Ch'ung-king money can be sent by draft, telegraph or in bullion. The Chinese post guarantees safe delivery and engages to make good any loss.

Ch'ung-king, the great commercial mart of western China contains 27 banks, most of which have agencies in Yün-nan-Fu.

From Ch'ung-king to Yün-nan Fu (630 miles) letters pay 200 *cash* (about 5*d.*), packages of one *catty* (1½ lb.) pay 350 *cash*, silver bullion pays a special fee of 350 *cash* for 10 *taels* which includes postage, registration, and insurance.

There are Chinese merchants in Bhamo through whom money can be remitted to T'êng-yüeh, Ta-li Fu and Yün-nan Fu. There are no merchants in Ssü-mao having business connection with Burma or Siam, and silver must be taken when going there. Rupees are readily accepted.

In Yün-nan Fu much of the trade is carried on by a system of exchange. There are four *hongs* or big firms where goods are stored for sale.

The provinces of Yün-nan, Kuang-hsi, and Kuei-chou are bound together in a sort of trade guild.

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CHAPTER VII.

COMMUNICATIONS.

From a modern point of view the communications of the province of Yün-nan can only be described as bad. The mountainous nature of the province makes the large rivers so full of rapids and boulders that they cannot be navigated, and the roads so difficult that quick land-travelling is impossible. There is no river in the interior of Yün-nan that is of any practical use for boats, much less for steamers, while roads are merely mountain paths fit for no transport but pack mules and ponies.

Roads.—These, throughout the country, are execrable; the Chinese pay but little attention to grading them and, unless following the bed of a river, they ascend and descend with startling suddenness. They are generally unmetalled and in consequence cut up easily in wet weather. Between the large towns they are sometimes paved with large blocks of stone laid without any foundations; these soon become worn and irregular, besides being very slippery in wet weather. The Chinese themselves say of them "good for ten years and bad for a thousand." They are usually only broad enough to carry a single line of mules; the unmetalled roads are almost preferable to them, unless they are in an unusually good state of repair.

In the low-lying rice-growing districts the crops are brought right up to the side of the road, which in wet weather often serves as a sort of drain to carry off surplus water.

Bridges.—In striking contrast to the roads are the bridges, which are surprisingly good; whether wooden, stone arched, cantilever or suspension.

The latter are a remarkable feature.

The following brief description of the Lu-chiang or Salween Bridge will serve as an example.

This bridge consists of two spans—the eastern one being about 100 yards and the western 75 yards long.

The roadway is supported on 15 chains the ends of which are sunk into the masonry of the abutments, and the pier. The sag in the chains is much less than might be expected. The roadway is 9' wide and consists of transverse planking. Two chains are suspended above the two outside supporting chains and are connected with them at five paces interval by rather flimsy vertical chains. The pier has a length of 45 yards and a width of 20 yards. This great length is due, partly to the fact that the measurement included the rounded cut-waters both up and down stream and partly to the fact that the two spans are not in line, the one span being some 35 feet out of line with the other.

The abutments of this and of every other bridge are solid and well built, rather more so than would appear to be necessary. The banks are not infrequently protected up and down stream by a length of masonry wing-wall.

Railways.—The only railway in the country is the French line from Hai-phong to Yün-nan Fu. It is a single line, metre gauge and about 516 miles long. It is liable to damage by floods and in case of hostilities would be very vulnerable, having 150 tunnels and many bridges.

The capacity of one train has been estimated at one French Company, say 250 men. All further details available are given in Appendix A.

Water Communications.—The Yang-tze Kiang is navigable for ocean-going steamers to Han-kow. For river steamers to I-ch'ang and small steamers to P'ing-shan Hsien. Beyond this is a hundred miles or so of rapids. As far as Yün-nan is concerned Sui Fu is the principal port. A vast number of junks and native boats are often collected there. From Sui Fu to Shang-hai the journey takes 3 weeks, but the return journey nearly double that time. The carrying trade on the Yang-tze will probably suffer when the Han-kow—Ssu-ch'uan Line is open.

Owing to their swift current and many rapids the Salween and Mekong may be entirely ignored as means of communication. It is true that native boats do ply on some of the reaches, but to no appreciable extent.

Red River.—Large boats with a carrying capacity of 4 or 5 tons run between Man-hao and Lao-kai. From here to the French garrison town of Yen-bai, steamers run except in the winter. Junks ply at all times.

Shweli.—The Shweli is navigated by small boats and rafts throughout the year from Man-pying in Se-fang to below Nam-hkam.

Nam Ting.—Dugouts and rafts run 50 miles up the Nam Ting to Mong Kyen (Mêng-chien).

Taping.—Small boats and rafts run from Mong Na to Man-waing.

ROAD COMMUNICATIONS. (See *Route book*).

The principal roads from British territory into Yün-nan are:—

A.—Myitkyina to T'êng-yüeh.

120 miles, 12 stages.

A fair mule road, improving as it approaches T'êng-yüeh. Boundary range crossed in stage 6 where the hills are steep, rough and difficult, a second high range (8,300 feet) is crossed in stage 11. There are difficult gorges in stages 8 and 11. The hills become more undulating nearer T'êng-yüeh. Taping river is crossed in stage 10.

Camping grounds good and large except at stage 8.

Water plentiful; grazing scarce; supplies scarce except at San-si.

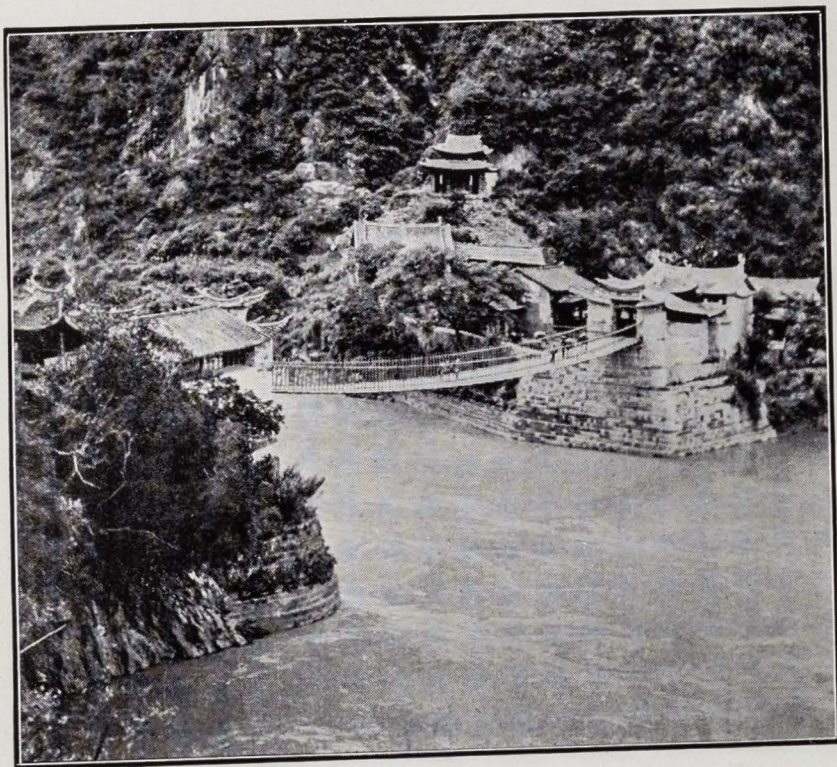
B.—Bhamo, T'êng-yüeh, Ta-li Fu, Yün-nan Fu, and thence north-east to the Yang-tze Kiang.

This might be called the "Grand Trunk Road" of Yün-nan, it forms the link between Burma and China, and nearly all the principal routes in the province join it. Its total length is 911 miles and it may be divided into 6 sections.

1. Bhamo to T'êng-yüeh. 132 miles, 11 stages. A good mule road throughout the year, in places broad enough to carry a double line of mules. First 3 stages cart road. Rather liable to damage from heavy rain: many small bridges believed to be in good repair. Main obstacle, the Hu-lu-k'ou gorge, 7 miles west of Nan-tien. In wet weather there are dangerous quick sands, and the road along the side of the hill must be sought, though this is somewhat liable to crumble away.

Camping grounds good. Water plentiful. Fuel plentiful.

2 T'êng-yüeh to Ta-li-Fu, 157 miles, 15 stages. A good mule road, generally paved, though paving bad in places. Crosses



The Lan-ts'ang bridge over the Mekong river.

Shweli river by chain suspension bridge, and Salween by "Lu-chiang" bridge. The latter was reported broken in November 1911, crossing being effected by raft ferry $2\frac{1}{2}$ miles down stream. The Me-kong is crossed by Lan-ts'ang suspension bridge. From Yang-pi there is a direct route to Ta-li-Fu over the hills.

Ta-li-Fu is a great natural stronghold, protected from the west by a difficult range of hills, while approaches from north and south are guarded artificially.

Camping grounds not generally very spacious, water good, grazing poor, supplies scarce.

3. Ta-li Fu to Yün-nan Fu, 223 miles, 21 stages. A very important trade route, well paved, passable for mounted troops. Two ranges of hills, 8,100 and 7,100 feet, respectively, are crossed. Camping grounds good. Water plentiful, grazing scanty, supplies plentiful.

4. Yün-nan Fu to Tung-ch'uan Fu, 130 miles, 10 stages. Good mule road, passable for mounted troops. One range of hills, 8,100 feet. Camping grounds good and spacious. Water, grazing and supplies plentiful.

5. Tung-ch'uan Fu to Chao-t'ung Fu, 86 miles, 7 stages. Fairly good unpaved mule road. Several ridges and steep gradients. Camping grounds spacious. Water plentiful, grazing and supplies scarce.

6. Chao-t'ung Fu to Sui Fu, 182 miles. A practicable but indifferent mule road through difficult country: at one time it was the main trade route, but is now rather out of favour. Camping grounds rather restricted. Water plentiful. Supplies fairly plentiful. From Lao-wa-tan the journey can be made by boat.

Alternative routes.

4th Section, Yün-nan Fu to Ch'ü-ching Fu, 86 miles, 7 stages. Good mule road, passable for mounted troops. 1st 3 stages cart road. Camping grounds generally good. Water, grazing and supplies plentiful.

5th Section.—Ch'ü-ching Fu to Wei-ning Chou, 115 miles 11 stages. Good level mule road, passable for mounted troops. Three ridges to be crossed. Water scarce in last stage. Supplies and grazing fairly plentiful.

6th Section.—Wei-ning Chou to the Yang-tze Kiang. From Wei-ning Chou the Yang-tze can be reached either at Chiang-an Hsien or at Na-chih Hsien; the former in 174 miles, 18 stages. Both are said to be fairly good mule roads though neither have been very fully reported upon.

As far as the actual route from Yün-nan Fu to the Yang-tze Kiang is concerned, that to Chiang-an-Hsien is probably the best.

C.—Bhamo or Lashio *viâ* Nam-hkam to Yung-ch'ang Fu and thence as above to Ta-li Fu. From Nam-hkam 172 miles, 19 stages. A fairly good mule road. Crosses the Salween by La-mêng bridge or ferry, though latter has fallen into disuse. Camping grounds spacious as far as the Salween valley, after that rather restricted. Water plentiful, grazing poor, supplies fairly plentiful.

D.—Lashio to Yung-ch'ang Fu *viâ* Kun-long ferry and Ma-li-pa, 109 miles, 15 stages. Good mule road over undulating country. Camping grounds fairly good. Water rather scarce in places, grazing fair in places. Capacity 2 battalions.

E.—Lashio to Ta-li Fu *viâ* Kun-long ferry and Yün Chou, 305 miles, 29 stages.

1st Section to Yün Chou, 18 stages. Unmetalled cart road for first 24 miles. Remainder good mule road. Direct road is difficult. A more practicable one makes a detour through Mien-ning T'ing. The Nam Ting is crossed by a bridge. Camping grounds good, water supply ample, grazing and fodder scarce. Supplies fairly plentiful. Capacity one brigade.

2nd Section.—Yün Chou to Ta-li Fu. There are two routes, both practicable.

(a) *Viâ* the Yang-kai ferry over the Me-kong River, Kung-lang and Mêng-hua T'ing. There are alternative ferries on this route,

(b) *Viâ* Shun-ning Fu and bridge over Me-kong, thence *viâ* A-lu-shih. Each of these is traversed in 11 stages, the distance being 116 and 118 miles respectively.

(a) route is good for 8 stages and then very good. Camping space cramped. Water plentiful, grazing scarce, supplies fairly plentiful.

(b) good, but steep. No ferry boats at the Me-kong crossing. Fair grazing, supplies scarce.

F.—Keng-tung to Ta-li Fu *via* Keng-hung and P'ü-êrh Fu, 505 miles, 39 stages. In Chinese territory the track is only a fair one, several difficult places on the way to P'ü-êrh Fu, remainder fair mule road. Camping grounds and water believed fairly good, grazing fair in places. Supplies rather scarce except at large towns. Country east of Me-kong said to be barren. A main road from P'ü-êrh Fu to Yün-nan Fu branches off this road at Mo-hei.

II. From Yün-nan Fu into Kuang-hsi.

G.—Yün-nan Fu to Pai-se T'ing, 387 miles, 30 stages; to Ning-chou (80 miles) good road paved in parts passing through a well-watered, populous country. Country to east of Ning-chou less fertile. Water at many stages scarce. River Ta Ho crossed by ferry. Road as far as Kuang-nan said to be good, beyond this very few details are available; road said to be indifferent.

Pai-se is the head of navigation of the West River. A firm called Messrs. Banker are running a fleet of launches on the river, and should the proposed railway from Yün-nan Fu ever be made, this will develop into an important trade route.

III. From Yün-nan Fu to Kuei-chou.

H.—Yün-nan Fu to An-shan Fu.

As far as Ch'ü-ching Fu good mule road, sometimes practicable for carts, country gradually becomes drier. Camping grounds ample. Water scarce in parts. Grazing good in places. Supplies scarce. Further details are not forthcoming.

IV. From Yün-nan to Ssü-ch'uan.

K.—Yün-nan Fu to Hui-li Chou and thence to Ya-chou and Ch'êng-tu. As far as Hui-li Chou, 165 miles, 15 stages, a mule road of usual type. Yang-tze crossed by Lung-kai ferry. Camping grounds not spacious. Water generally plentiful, grazing good in places. Supplies fairly plentiful. No further details available. From Hui-li Chou to Ch'êng-tu about 400 miles. Good mule road through fairly populous country, up to Yüeh-hsi T'ing (170 m.) mountainous country, several rivers to be crossed before Ch'êng-tu is reached.

L.—Ta-li Fu to Ba-tang *via* Wei-hsi T'ing, A-tun-tzü and Yak'a-lo, about 470 miles. As far as the Yang-tze Kiang this is a good mule road, paved in parts, water and camping space ample,

supplies fairly plentiful. As the road proceeds northwards it is inclined to deteriorate. Camping grounds become less spacious and supplies scarce. Every thing points to this being considered an important route by the Chinese authorities and by latest reports repair work is in progress, but details are not forthcoming. It was used by the Yün-nanese troops when proceeding to the Tibetan Marches in 1910.

M.—Hui-li Chou to Li-chiang Fu, 203 miles, 16 stages. A cross-road connecting K and L. A fair mule road, country rather rough in places. Road crosses Yang-tze Kiang three times.

V Main roads in Ssu-ch'uan leading westwards.

N.—Ch'êng-tu to Ba-tang and so to Lhasa. Known as the *Nan lu*. This road passes through Ya-chou and traverses exceedingly mountainous country, crosses the Tung river by a suspension bridge and the Ya-lung by a new suspension bridge at Ho-k'ou. As far as Ta-chien-lu it is paved, but crosses several passes: at one time the road over them was composed of stone steps. From Ta-chien-lu the road ascends to the Tibetan plateau and rises to 15,000 feet in many places; from here onwards travelling in winter is difficult on account of the snow. From Ba-tang the road makes a bend southward and the Me-kong is crossed by a ferry; from Ba-mu-tang it strikes north again through Gartok and Chiamdo and thence to Lhasa. The actual condition of this road is not known, but great attention was paid to it during the regime of the late Chao-êrh fêng (1906—1911,) and most of the troops, etc., that have moved into Tibet have used it.

O.—Ch'êng-tu to Sung-pan T'ing and thence *via* the northern route into Tibet. Known as the *Pei-lu*.

The total distance to Sung-pan T'ing is about 200 miles. A good road, passable for mules throughout: it is much used by tea caravans. As far as Kuan Hsien it goes through a populous country, after this the country becomes rougher, villages smaller and less prosperous, several rivers have to be crossed by bridges, either of stone, rope or bamboo.

PROJECTED RAILWAY.

The following railways are projected or contemplated.

Mêng-tzŭ to Ko-chiu.

This line has been surveyed by American engineers and its construction was on the point of being started when the revolution broke out, and up to May 1913 nothing was being done.

The length of the line is only 34 miles and it will connect the tin mines with the French railway.

Yün-nan Fu to Pai-se.

This line has been surveyed and the construction was approved of in 1909. Up to May 1913 a start had not been made. In 1912 the Yün-nan Government rejected a proposal by a French engineer to construct this line.

Yün-nan Fu to Yang-lin.

A Decauville railway has been proposed for connecting Yün-nan Fu and Yang-lin.

Yün-nan Fu to Sui Fu.

The approved course for this line is *via* the Niu-lan valley to Chao-t'ung Fu and thence along the valley of the Hêng-chiang.

The Chinese want to have a 4'8½" gauge so as to connect up with their other lines, but European engineers consider the cost prohibitive and have suggested a metre gauge. It is unlikely that sufficient money will be forthcoming for some time to begin the railway, though there are rumours that the French are anxious to get a concession to build it. Its construction will probably take 8 years to complete. The French proposal was rejected by the Yün-nan Government in 1912.

Yün-nan Fu to Ch'êng-tu.

This line has also been surveyed but there is no immediate prospect of it being started.

Hankow-Ssŭ-ch'uan.

This line has been surveyed and is partly under construction. 50,000 coolies were reported to be working on 100 miles of line between I-ch'ang and Hsiang-cha in 1911. Work was interrupted by the revolution and much of what had been done has fallen into disrepair.

Kun-long to Yün Chou.

This has been partly surveyed and was suggested at one time as one worthy of British support. In commercial and political circles the Bhamo-T'êng-yüeh line is most favoured.

Bhamo-T'êng-yüeh.

The line has been surveyed and is said to be practicable. The survey has also been prolonged to Ta-li Fu.

TELEGRAPHS.

The head of the Telegraph Department is Chinese, as also are all the subordinates, except a Danish Superintendent, who has little or no power. The management is very bad, breakdowns frequent, and delays interminable, every telegram sent, except by private code, becomes general property. Messages are sent by numbers, of which there are 10,000, each representing a Chinese word. The cost is .22 *tael* (about As. 6) for every word in Chinese character, and double that rate for foreign words.

Yün-nan is connected with the rest of China by the Yang-tze valley Line, and within the province are five branches.

The north-east branch connects Yün-nan Fu with Lu Chou on the Yang tze, and follows the main road with intermediate offices at Ch'ü-ching Fu, Chan-yi Chou, Hsüan-wei Chou, Wei-ning Chou and Pi-chieh Hsien. From the last named a short branch runs east to Kuei-yang Fu in Kuei-chou.

Lu Chou is connected with Han-kow by a line which was considerably improved in 1910-11.

The western line runs from Yün-nan Fu to Bhamo, with intermediate offices at Ch'u-hsiung Fu, Ta-li Fu, Yung-ch'ang Fu, T'êng-yüeh and Man-waing.

A branch runs north to Li-chiang Fu and thence *via* Chung-tien to A-tun-tzŭ; the section Li-chiang Fu to A-tun-tzŭ was opened on 16th January 1913.

A connection between the Western line and the Burmese system, *via* Man-chang-kai and Ku-li-hka has been sanctioned; work was expected to begin in March 1913.

The south-west branch runs from Yün-nan to T'ung-hai and to Ssŭ-mao T'ing with offices *en route* at Yüan-chiang Chou

and P'u-êrh Fu. From Ssü-mao a branch runs to Mông-hu in French Laos, which is connected with Hanoi and Lai-Chou.

The south-east branch runs from T'ung-hai (see above) through the offices of Mêng-tzu Hsien, K'ai-hua Fu, Kuang-nan Fu, Kuei-chou, Po-ngai to Pai-se, at the head of the navigation of the Yu-Chiang, the southern branch of the West River. Skirting the left bank the line passes by Nan-ning Fu to Canton.

From Mêng-tzŭ there is a branch line *viâ* Lao-kai to Tongking.

The Chinese Government consented, in 1910, to construct a telegraph line from Man-chang-kai, where the present line from Bhamo to T'êng-yüeh crosses the river from south to north, along the south bank to Ku-li-kha, with an intermediate station at Hsiao-hsin-kai. From Man-chang-kai to Man-waing, the existing telegraph line is to be maintained, but abandoned beyond. Thus Man-waing will cease to be an intermediate telegraph station between Bhamo and T'êng-yüeh and will be on a branch.

In Ssü-ch'uan a line exists, though it has suffered many interruptions of late, from Ch'êng-tu, Ta-chien-lu, Ba-tang, to Chiamdo—with stations at Ho-k'ou, Li-tang and Draya.

In 1911 a scheme was set on foot for the establishment of wireless communication between Peking and Lhasa. So far nothing has been done.

There is a telephone exchange in Yün-nan Fu.

POSTAL SERVICE.

Postal communications in the Province are maintained by the Postal Department of the Chinese Imperial Maritime Customs, by carriers on two main lines, running east and west.

The post offices on the northern line are T'êng yüeh, Yung-ch'ang Fu, Ta-li Fu, Mêng-hua Ting, Ch'u-hsiung Fu, Yun-nan Fu, and Ma-lung. From here, one line runs east to Ch'ü-ching and the Kuei-chou province, and another north-east to Tung-ch'uan Fu, Chao-t'ung Fu, and Sui Fu on the Yang-tze.

The southern line runs from Ssü-mao, P'u-êrh Fu, T'a-lang, Shih-ping Chou, Lin-an Fu, Mêng-tzŭ, K'ai-hua Fu, Kuang-nan Fu, into Kuang-hsi.

The northern and southern routes are connected by a line from Yün-nan Fu to Lin-an Fu.

APPENDIX A.

RAILWAY FROM LAO-KAI TO YÜN-NAN FU.

This railway was constructed with funds raised by:—

- (a) French syndicate known as “La société de construction des chemins de fer de L’Indo-Chine.”
- (b) “Compagnie des chemins de fer de L’ Indo-Chine et de Yün-nan.”
- (c) The Tongking Government.
- (d) The French Government.

The work of construction was conducted by the ‘Société and when a section was completed it was handed over to the ‘compagnie.’

Gauge.—Metre (39.57 inches).

Track.—Single, ruling gradient 1.25 to 2.5.

Rails.—40 Kilogrammes, 9 metres long, flat bottomed.

Sleepers.—Iron pot sleepers 12 to one length of rail fastened with clip plate, single nut and bolt.

Ballast.—To kilometre 153, schist.

To kilometre 200, limestone.

To kilometre 222, conglomerate limestone.

To railhead, limestone.

Section Lao-kai to A-mi Chou.

The greater part of this section is in the valley of the Nam Ti river. Gradients are very steep. Many tunnels and bridges. 15,000 coolies were buried during the construction of the section owing to landslips, etc. A loop or ‘boucle’ was made in this section owing to the mistaking of a tributary for the main stream of the Nam Ti.

Section A-mi Chou to Yün-nan Fu.

Tunnels and bridges very numerous, landslips common, owing to nature of soil and earthquakes, gradients not so steep. The line does not touch the Mêng-tzü city or plain but passes 3 miles to the east of it.

The whole railway is liable to interruption in the rains from floods and landslips. Much of the line passes through very mountainous country.

Tunnels.—There are over 150 tunnels on the line.

Up to kilometre 153, Ta-chuang 92. Thence to Yün-nan Fu about 60.

Some of the tunnels are entirely lined, some partially, some not at all. Lining of lime stone set in Portland cement. On one section of 70 kilometres there are 8,000 metres of tunneling.

Bridges.—The bridge at kilometre 112 is unique in the world. The line emerges from a curved tunnel at each end of the bridge, which is 900 feet above the river.

Details of bridges of 30 feet span and over.

Distance from Lao Kai in Kilometres.			No. of spans.	Description.
45	..	..	1	Lattice.
83·7*	..	..	9	Steel trestle viaduct, curved.
89	..	..	2	Steel viaduct.
91·25	..	..	3	Steel trestle viaduct.
95*	..	..	5	Steel trestle viaduct, curved.
112*	..	..	1	Steel single lock.
125	..	..	1	Single stone arch.
195·6	..	..	6	Stone arches.
220	..	..	1	Lattice.
225	..	..	3	Stone arches.

Between A-mi Chou and Yün-nan Fu are about 5 steel lattice girder bridges and several stone bridges.

Those marked * would be very difficult to reconstruct if damaged.

Workshops.—At Phu Moi, 3 miles south of Lao-kai (in Tong-king), are the big workshops of the company, in which all the larger operations are undertaken. At A-mi Chou are machine shops for minor repairs and construction of line.

At Po-hsi temporary establishment for assisting line construction.

Principal Stations.

—	Coal.	Engine shed.	Repairing shed.
Ho-k'ou,	No.	No.	No.
La-ha-ti	Yes.	No.	No.
Mi-la-ti near Mêng-tzŭ..	Yes.	No.	No.
A-mi Chou	Yes.	Yes.	Yes.
Po-hsi	No.	No.	Temporary.

Telegraph Instruments. Morse recorders.

No telephone on trunk line.

Stations well built and solid, sidings are numerous.

Trains.—Average speed, goods and passenger, 17 kilometres an hour including stoppages.

Rolling-stock.—Mainly covered goods vans, 4 wheels, sliding doors, some open trucks and some low-sided trucks for construction purposes.

Passenger (4 classes) 1st, 2nd, and 3rd; corridor coaches for 6, 12, and 24 persons respectively. 4th class for Asiatics only—100 to 150 per coach. Engines 20, heavy type for steep gradients, 100 light type, all built in France.

Fuel.—Coal briquettes made in Hon-gai, mixture of Hon-gai and Japanese coal. Locomotives also burn wood.

Staff.—Unskilled labour—Annamese, Cantonese and a few Yün-nanese.

Engine drivers, Annamese.

Passenger Guards, French.

Goods Guards, Annamese.

Stationmasters, French or Annamese.

APPENDIX B.

GLOSSARY OF COMMON WORDS AND TERMINATIONS.

CHINESE.—

1. *Geographical*—

Pei=North.

Nan=South.

Tung=East.

Hsi=West.

Chang=small flat space (lit. palm of hand).

Chên=commercial town.

Ch'êng=walled town or village.

Chiang (often spelt Kiang)=large river.

Ch'iao=bridge.

Ch'in=narrow valley (Yün-nanese word).

Ching=well.

Chou=a town of 3rd class.

Chuang=farm or village.

Fang=house.

Fêng=range or peak.

Fu=a town of the 1st class.

Hai=sea or lake.

Hu=lake.

Ho=a river.

Hsien=a town of the 4th class.

Kou=small stream or ditch.

K'ou=mouth of river or defile.

Kuan=pass, barrier or post.

Lin=wood or grove.

Ling=pass or range.

Miao=temple.

Pa=a plain.

P'ing=flat place.

P'o=small hill.

P'u=shop or village.

Shao=police station.

Shan=mountain.

Shui=water.

Ssü or Shih=Buddhist temple or monastery.

T'an=a rapid.

T'ang=hall or public building.

Ti=field (not irrigated).

Tien=inn.

T'ien=irrigated field.

T'ing=a town of the 2nd class.

Ts'un.=village.

Tu	} ferry.
Tu-k'ou		..	

T'un=village.

Tz ũ=ancestral temple.

Yamen=the residence and court house of an official.

Yüan=garden.

Yün=cloud.

Prefixes.—

Ta=great.

Hsiao=small.

Shang=upper.

Hsia=lower.

Military.—

Chai=a fort or post.

Chên=a division. (New name Shih-T'uan.)

Chün=an army or army corps.

Hsieh=a brigade. (New name Lü.)

Piao=a regiment. (New name T'uan.

Tui=a company. (New name Lien).

Ying=a battalion, fort or cantonment.

Shan,—

Mong=district or country.

Kat=market village.

Loi=mountain.

Man or Ban=village.

Nam=river.

Ta=ferry.

No=upper.

Taü=Lower.

Tibetan,—

Gomba=Buddhist monastery.

La=pass.

Ch'u=river.

Kachin.—

Hka=river.

Pum=mountain.

Miscellaneous.—

Hpôngyi Kyaung=Monastery.

Pôngyi Kyaung.

Wat=Shrine.

Zayat=Rest house.

APPENDIX C.

The following works refer to Yün-nan and the neighbouring countries—

Yün-nan	..	..	..	Major Davies.
Land of the Lamas	..	..	..	Rockhill.
Gazetteer of Upper Burma	..	..	..	Scott.
Western China, travels in (Royal Geographical Society).	..	..	..	Hosie.
"Marco Polo"	..	..	..	Yule.
Tongking to Assam	Prince Henry of Orleans.
Travels in Western China	Baber.
An Australian in China	Morrison.

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